

The American Begonia Society's
Unidentified Species Listing
August 2010



Begonia U555
Photo by Mary Bucholtz

Compiled from Listings in the *Begonian*, notes from collectors
and notes from Co-directors, Charles J. Jaros and Mary F. Bucholtz



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AUGUST 2010

This is a continuation of the previous work, American Begonia Society's Unidentified Begonia Species Listing, May 2007. This Update begins with U521, with the last listing, U603.

We have tried to follow the notations of the previous editor, Freda Holley, which are explained in the beginning of the previous American Begonia Society's Unidentified Begonia Species Listing, May 2007, including using { } to insert any new information or references.

We are now using a loose leaf format, making insertion of new information easier. It is our intention to issue an update every 18 months, or when having assigned a total of one hundred (100) new U numbers. For your convenience, as reference material, we are providing a section of available photographs.

This present listing is compiled primarily from notes from the collectors, or from those people who have given the co-directors living plant material of the U number. The descriptions and notations given by the co-directors are so noted. Additionally, other information may have come from various individuals based on their experiences.

We wish to thank the numerous members of ABS who have contributed information or photographs, helping us to bring this update to you. Rekha Morris' photos accompany her notes. A special thanks to Kingsley Langenberg for his editing of this update.

The current Co-directors of Unidentified Species are Charles Jaros and Mary Bucholtz. The current Nomenclature Editor is Kingsley Langenberg and the current Nomenclature Director is Gene Salisbury.

UPDATED INFORMATION/IDENTIFICATION OF EARLIER PUBLISHED U NUMBERS

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U076 {Identified by Mark Tebbitt as *B. polilloensis*, (according to *Begonias, Cultivation, Identification, and Natural History*, Mark C. Tebbitt, 2005) }

U152 {Identified by Shui & W. H. Chen as *B. variegata* Shui & W. H. Chen [=*B. masoniana* Irmsch. ex Ziesenh. var. *maculata* S. K. Chen, R. X. Zheng & D.Y. Xia]. *Botanical Bulletin of Academia Sinica*, Vol. 46, 2005

U404 {Identified by Mark Tebbitt, as a spotted variant of *B. hemsleyana* (*Begonias, Cultivation, Identification and Natural History*, Mark C. Tebbitt, 2005) }

U434 {Identified by Dr. Kathleen Burt-Utley as *B. barsalouxiae* (= *B. plebeja* according to *Begoniaceae, Edition 2*, Jack Golding and Dieter C. Wasshausen) }

U476 {Tentatively identified by H. Nguyen as *B. filiformis*, 2/2006}

U477 {Identified by H Nguyen as *B. palmata* var. *palmata*, 2/2006}

U485 {Collected by Mary Sizemore, collection site unknown. Dark maroon leaves. 2009}

U492 {Cutting given to Charles Jaros from Tom Keepin, who received it from Diana Wilkinson, who received it from Ft. Worth Botanical Garden. 2009}

U508 {Additional information from Jacky Duruisseau, 2009. "It was brought back by Henri Laporte from the Kuala Lumpur Orchid Garden (not Kuala Lumpur Botanical Garden as I told you) in 1995. Henri shared of it with AFABEGO {Assoc. Francoise de Amateurs de Begonias} members. He called it 'Cote de Castillon' and all here, grow it with this name. Cote de Castillon is a wine: Henri was a wine grower (in the Castillon area) when he was retired (before he was an electricity teacher); so the red color of U508 inspired him for the name...who is, of course, no recognized."}



American Begonia Society's Unidentified Begonia Species Listing, May 2007

In 1981 when Carrie Karegeannes and Thelma O'Reilly were Co-directors of Nomenclature, a system of listing species begonias whose identity was unknown was established. Phyllis Bates served as first Coordinator of the U-number files. The following explanation for this action was published with the first listing of U-numbers in the Vol. 49, February 1981 issue of the *Begonian* on page 53:

The influx of unidentified species of the *Begoniaceae* has led to some confusion in recent years, particularly when several species are attributed to the same geographic source. [For example, several so-called Brazil species are now in cultivation.]

The ABS nomenclature department and Clayton M. Kelly Seed Fund now are instituting a uniform numbering system for unidentified species. A "U-number" ("U" means unidentified) has been assigned to each unnamed species and a number will be given to each new unnamed species that goes into circulation.

Many plants sold at the ABS convention in Long Beach, Calif., were labeled with U-numbers. Seeds of unidentified species offered by the seed fund will carry assigned numbers.

When positive identification has been made, the correct name will be published and collectors can change their labels.

Plants listed as numbered unidentified species in the catalogs of Kartuz Greenhouses and Mildred Thompson have been assigned U-numbers using as last digits the numbers used in the catalogs. They are species 1, 2, 3, 4, 9, 10, 12, 13, and 14. One exception is the plant listed as No. 10 in the Thompson catalog, which is U009.

U-numbers assigned to the Philippine species sold at the ABS Long Beach Convention include U006, U007, U011, U015, U016, U019, U020, U021, U022, U023, U024, and U025 (See the August 1980 *Begonian*, pages 216-217.)

ABS encourages hobbyists and commercial growers to use U-numbers on seeds, plants, and cuttings. U-number coordinator Phyllis P. Bates will keep files on all numbered species containing the source, collection information, growing and distribution information, description, and tentative identification for each. The coordinator will compile information, but will not make identifications.

Notes on unnamed species will be published in the *Begonian*, but the coordinator will respect confidential reports.

Numbers are to be assigned to seeds or plants as they are first distributed, even to a limited degree. No hybrids are to be included. Contact the coordinator for information.

The current Coordinator of Unidentified Species is Thelma O'Reilly. The current Director of Nomenclature is Gene Salisbury. This present listing is compiled primarily from the entries in the *Begonian* from 1981 to the present and from a listing prepared and printed by John Ingles some years ago. Additionally, some notations have been provided by Thelma O'Reilly and various other individuals as well as, in a few cases, from the current editor's own experience.

<u>U Number</u>	<u><i>Begonian</i></u>
U001-032	Vol. 49, 2/1981 p.33
U080-087	Vol. 50, 7/1982 p. 83
U050-62	Vol. 52, 7/1984 p. 85
U063-79, 88-89	Vol. 52, 11/1984 p. 234
U033-49	Vol. 54, 3/1986 p. 53
U090-100	Vol. 56, 5/1988 p. 81
U101-120	Vol. 57, 5/1989 p. 101-103
U121-135	Vol. 58, 7/1990 p. 234
U136-151	Vol. 58, 9/1990 p. 176
U152-159	Vol. 59, 1/1991 p. 33
U160-177	Vol. 59, 3/1991 p. 55
U178-186	Vol. 59, 9/1991 p. 170
U187-200	Vol. 60, 1/92 p. 29
U201-217	Vol. 60, 5/92 p. 95
U218-228	Vol. 62, 5/1994 p. 88

U229-240	Vol. 63, 3/1996	p. 59-60
U241-248	Vol. 63, 5/1996	p. 105-104
U249-256	Vol. 64, 1/1997	p. 8-9
U257-265	Vol. 65, 5/98	P. 94
U266-275	Vol. 70, 9/03	p. 186-189
U276-292	Vo. 71, 1/04	p. 32-36
U293-301	Vol. 71, 3/04	p. 46-47
U302-313	Vol. 72, 9/04	p. 190-193
U314-322	Vol. 73, 9/06	p. 171
U335-336, 340-343, 345-348, 352-355	Vol. 63, 3/96	p. 69
U412-425, 427-429	Vol. 68, 11/01	p.223
U496-510	Vol. 74, 3/07	p. 70-71, 74-75

Above is a notation of the issues of the *Begonian* in which original listings appeared.

The first listing from Thelma O'Reilly appeared in the March/April 1986 *Begonian* with this foreword:

The ABS Nomenclature Department maintains a list of unidentified species. These are assigned numbers preceded by "U" for unidentified.

Many inquiries have been received about the unpublished group of U numbers from *B. U033* to *B. U049*. Information covering the majority of listings in this group is scarce and sometimes confusing. The following list completes all U numbers assigned from *B. U001* to *U089*.

It is possible some of these U numbers are new species. Further research is in progress. Your cooperation in supplying any information, including observations, photographs, slides or drawings, for this group or any other unidentified species will be appreciated. Write to Thelma O'Reilly, 10941 Sunray Place, La Mesa, CA 92041.

A few of the U-numbers species have been identified. This information will be published in the *Begonian* along with additional listings, which now have reached number *U191*. We will also include added information, including cultural findings, on earlier listings as these become available to us.

In this current listing, all page number and issue notations refer to the *Begonian* unless otherwise stated. In his listing made in early 1990, John Ingles used () to denote informational items; [] to denote seed fund listings; and < > to show a previous name. These are consistent, but those in the original listings in the *Begonian* are not, nor do they agree with the system used by John Ingles at all times; this was because there were different directors and editors at work as the various listings were published. The current editor tries to preserve notations as originally presented; at times this unfortunately leads to a lack of consistency, but still the editor prefers to preserve the originals in so far as possible. The original *Begonian* listing -- where one exists -- is always given first, followed by the listings made by John Ingles where they are appropriate. Sometimes he added information such as classification and the editor has placed these in () to indicate they were informational and not part of the original *Begonian* listing. At times, adding some of John Ingles listings may give redundancy, but often helps to identify the *Begonian* issue in which an important notation is listed. Finally, the editor also uses { } to insert any new information or references at the end of the listing. The editor recognizes that this is all often confusing, but hopefully the information itself is fairly clear. Information provided on a few of the later listings by the editor are not meant to substitute for listings which will eventually be published, but are place holders with a little information to help growers. Some numbers where no information was available are listed - in light type because the idiosyncracies of the program used makes it easier to add later listings this way - so that growers may make notes as information becomes available. The listing that the editor has by John Ingles was so full of notes and so wear worn that it is almost unreadable, but is still greatly treasured.

Most collections were done by Martin Johnson (MJ), Roberto Brin (RB), and Scott Hoover (WSH) and because of the frequency of their collections, listings often referred to them by initials. Frequent identifications were made by Thelma O'Reilly (TOR) and by Jan Doorenbos (JDD) and again their initials were often used in listings.

The editor also wishes to thank Mary Bucholtz, Janet Brown, Rekha Morris, and Thelma O'Reilly who had the unpleasant task of editing a very early draft awash with typos. Their help was invaluable and remaining errors are due only to the editors later changes and additions. One of the reasons, I have compiled this listing is that many plants I have secured identified with U numbers could not be the plant as identified by that number in the listing. It is my hope that this listing will make it possible not only to identify these plants more accurately, but will also add to the grower's pleasure through knowledge of the origins and history of these plants.

Note: This March 2007 update contains all the new information available to the editor through this date including all entries in the *Begonian* since the last update in 2001. Big gaps in the information remain, but they are slowly being filled in. Again, all dates and page numbers unless otherwise noted refer to the *Begonian*. U Numbers that appear without information are those for which information is not yet available, but have been included so that notes may be added as information appears in the future. Also, special thanks to Mary Fuqua, Charles Jaros, Rekha Morris, Mildred Thompson, and others who provided me information for this update. Thanks also to Mary Bucholtz for the reprints of her photos of the newest unidentifieds



U508

U001: Brazil species with blue-green leaves bearing white scurf. Thick stemmed to 6 feet. Rhomboid leaves, felted. Flowers profusely, white. Collected by Ralph Spencer, deceased. Distributed by Los Angeles State and County Arboretum. (1981: 33; 1986: 73 = *B. grisea*) (1990: 137, = *B. grisea*. Ident. by RZ) {1986: 76-77, article, drawings, photo by R. Zieshenne}

U002 : Brazil species with medium-small bronzy leaves flushed red, covered with red hairs. Small white flowers. (1981: 33) (1990: 137 = *B. thelmae*) {Ed. note: This was incorrect identification; this is thought to be a natural cross of *B. thelmae* and *B. soli-mutata*.} {Johanna Kitson article 2003: 53-55, photo 54} {Mention by Doug Pridgen as growing well in Miami. 2005: 69}

U003: Brazil species with dark green, large leaves with pustulated surface, marked distinctively with light green radiating from the center, edged red. Small white flowers. Source: Burle Marx, Rio de Janeiro, via Gilbert Daniels. Photo: Cover February 1981. Shrub, <"Brazil species No. 3"> (1982: 25 cover, 33; 1984: 19; 1988: 60, named *glasiovii* in error);[1990: SF 109-110] (1990: 137, This begonia will be described as a new species in the near future.) {1990: 220 = *B. soli-mutata*} {Article by Johanna Kitson 2003: 53-5, photo 54}

U004: Africa. Tuberous. Tiny glossy leaves with silver markings. Light pink flowers. Dwarf with Compact habit. Forms bulbils along stem. (1981: 33; 1982: 83 = *B. princeae*) (1990: 137, = *B. princeae*).

U005: New Guinea. Tapered leaf, green. Small white flowers. (1981: 34) [1984: SF M-A8 35]

U006: Antimonan, the Philippines. Creeping plant. Seeds collected by Martin Johnson in 1979. (1981: 34)

U007: Luchan, the Phillipines. Collected as seeds by Martin Johnson. Cane or shrub-like with spotted and/or plain green leaves. May be seedlings of two species mixed together. (1981: 35) [SF M-J2 75; 1988: SF M-J4 96; 1989: SF 68-69; 1990: SF 67-70; 2003:SF 36] {Can reach a ht. of 10 ft. Smooth fairly thick, bright green leaves, everblooming, huge clusters of light pink flowers.}

U008: Shrub-like, medium leaved, kidney-shaped, light green leaves covered densely with silvery white hairs. Upright, branching. White flowers flushed pink year-round. Source: Hungarian Botanical Gardens. RZ import, shrub, white flwrs. (1981: 35-36) [1981: SF AP3 96] [1983: SF J-F5 24; 1987: SF J-F 11 24; 1989: SF 68-69; SF 2002 J-F JF02-05; 2003 SF 36] (1990: 137, = *B. subvillosa*, Ident. by RZ) {Mention in article by Peter Sharp, Australia. 2005: 175}

U009: Brazil species. Small felted leaves, dark green with light green radiating along center veins. Leaves set closely on red trailing stems. White flowers. Succulent. Distributed in Seed Fund as Brazil Species No. 1 (creeping). Source: Burle Marx, Rio de Janeiro, via Gilbert Daniels. (1981: 36, 105 cover, 107, 114-117 = *B. thelmae*) (1990: 137, = *B. thelmae*) {Article by Johanna Kitson 2003: 53-55, photo 54}

U010: Puerto Rico. Small leaved, shrub-like. Glossy, lobed leaves set closely. White flowers, dense, vase shaped. Shrub. (1982: 36; 1988: 61, same as RZ4047, 'Platysun' & Kartuz #10; 104) (1990: SF 108-110, collected Puerto Rico) (1990:137, Research has found a clue that leads to New Guinea as the collection site for this species.) {Photo: 1990: 240}

U011: Baler species. The Philippines. Collected by Martin Johnson as seeds. Photo: The Begonian, August 1980, page 217 (upper left). Baler, Phillipines, MJ collector. (1980: 217 photo; 1981: 36)

U012: *Symbegonia*. Small, elliptical, olive-green leaves bordered with bright pink. Pink stems. Low growing. Tubular flowers. Pink flwrs. (1981: 36) {Photo 1990: 136}

U013: *Symbegonia*. Small, light green, fluted leaves covered sparsely with red hairs. Low growing. (1981: 36)

U014: Argentina, Shrub-like, Bright orange, waxy flowers; everblooming. Small, narrow, satiny leaves, flushed red underneath. Low, spreading habit. Fred Fuchs and Tom Mentelos from Florida imported this plant. They obtained it from an orchid collector who lived off the highway that divides Aargentina and Paraguay. (1981: 36) [1982: SF J-A4 90] (1984: 4) [1985: SF MA3 41; 1986: SF 6-08 126; 197: SF N-D6 163; 1989: SF 68-69; 2006: 28; 2006: 155 SF listing deleted]]

- U015:** Mt. Banahaw, the Philippines. Shrub-like. Orange flowers. Collected by Martin Johnson as seeds. Photo: The *Begonian* August 1980, page 216 (top). (1981: 36; 1982: 83 = *B. cumingii*) (1990: 137, = *B. cumingii*, identified by Mildred L. Thompson, verified by JDD). {Photo cover, article 1986: 64}
- U016:** Taiwan. Imported as seeds by Martin Johnson. (1981: 36; 1989: 55-56) (1990: 137, Tentatively *B. formosana*.)
- U017:** Distribution limited (1981:36)
- U018:** Costa Rica. Rhizomatous. Collected by Martin Johnston in 1976 tour with Dr. Mildred Mathias. White flowers. (1981: 36) (1990: 137 = *B. manicata* var. *peltata*).
- U019:** Majayjay, the Philippines. Cane or shrub-like with bright orange flowers. Imported by Martin Johnson as seeds. Photo: The *Begonian*, August 1980, pages 216-217. (1980 216-217 Photo; 1981:36)
- U020:** Majayjay, the Philippines. Climber; 12 inch leaves. Orange flowers. Imported by Martin Johnson as seeds. Photo: The *Begonian*, August 1980. Trailing-scandent, orange flowers (1981: 36) (1990: 137, = *B. oxysperma*)
- U021:** Majayjay, the Philippines. Climber. Red flowers, imported by Martin Johnson as seeds. Photo: The *Begonian*, August 1980, page 217 (right). Trailing/scandent, orange flwrs. (1980: 217 photo; 1981; 36) (1982: 83) (1990: 137, = *B. oxysperma*)
- U022:** Mt. Makiling, the Philippines. White flowers. Imported as seeds by Martin Johnson. Annual. (1981: 36)
- U023:** Mt. Makiling, the Philippines. Red flowers. 2-inch leaves. 1 1/2 feet tall. Martin Johnson imported as seeds. (1981: 36)
- U024:** Mt. Makiling, the Philippines. Large yellow flowers. Martin Johnson imported as seeds. Not identical to U025. (1981: 36)
- U025:** Mt. Makiling, the Philippines. Large yellow flowers. Large leaves and stem. {John Ingles lists as rhizome with white flowers.) Not identical to U024. (1981:36) [1984 SF J-F13 10; 1986 SF N-D13 161; 1989 SF 112-114]
- U026:** Baguio, the Philippines. Leaves zoned attractively. May be related to *B. laciniata*. Martin Johnson purchased as a plant. (1981: 36) (1990: 137, = *B. palmata* var. *palmata*)
- U027:** Baguio, the Philippines. Thick-stemmed. Purchased by Martin Johnson as a plant. (1981: 36)
- U028:** Baguio, the Philippines. Seems to be small shrub with glabrous leaves, cleft with small red spot at petiole, shaded red lightly at nodes. Purchased as a plant by Martin Johnson. (1981: 39) (1990: 137, = *B. minor*, Identified by TOR. Received two small seedlings labeled *B. U028* and *B. U031* from Martin Johnson. At maturity she identified *U031* as *B. minor*. Later research showed that the labels were mixed before arrival. *B. U031* remains unidentified.)
- U029:** *B. 'Mystique'*. Dr. Fred A. Barkley gave seeds several years ago to Logee's which listed it as "Mystique" in its catalog. Also listed as species from Honduras in ABS seed fund. Fimbriated flower tepals, white with pink flush at tepal margin. Leaves pleated when young. (1981: 39) [1984 SF Ju-Ag 10 87; 1987 SF: M-All 38; 1989 SF 153-154] {02 M-J 90}
- U030:** Laguna, the Philippines. Imported as seeds by Martin Johnson. 1.5 m. tall. Shrub. (1981: 39) [1990: 137, = U007)
- U031:** Sao Paulo, Brazil. Imported as seed by Martin Johnson. Cane-like. White flowers. More than 3 ft. tall when growing in garden. (1981: 39; 1982: 830 [1984 SF J-F14 10; 1987 SF M-J 7 75; SF N-D11 163 spotted leaves; 1990: SF 67-70; 2003: SF 36]
- U032:** Sao Paulo, Brazil. Imported as seed by Martin Johnson. Collected on road descending to Ubatuba. Habitat overgrown forest overlooking sea, mist, and fog. (1981: 39) {1990, p. 136}

U033: Plant material imported from Japan and distributed by Rudolf Ziesenhenné under his number RZ 275. Rhizomatous, leaves medium green, broadly cordate, 3" x 3 1/2", undersurface glabrous with satiny finish, undersurface glabrous, but on nerves there are white hairs that turn rusty and wooly with age, subentire margin ciliate and finely edged in red, crisp texture; petioles 3" - 4" with abundant 1/8" - 1/4" white hairs that turn rusty and wooly with age; stipules 1/2", persistent, flowers white, glabrous, on 3/4", 4 male tepals -- two being much smaller than others, stamens yellowish orange, about 25 of which become thin and flat-appearing while drying and thus resemble tiny tepals; 3 female tepals, deep pink ovary with 3 long, narrow (barely noticeable) wings. Spring blooming. (1986: 53 + photo; 1990: 137, = *B. leprosa*. Tentatively ident. by Lynda Goldsmith. Verified by L.B. Smith).

U034: No distribution under this number. Seed not viable. (1986: 53)

U035: Source. Finnish Botanical Garden. Offered by ABS Seed Fund in late seventies under incorrect name of *B. acuminata*. It is reported that B. U035 may be the same as B. U049 and B. U099. (1986: 54) (1990: 137, = *B. U049* & *B. U099*)

U036: Guatemala. Seed supplied by R. Ziesenhenné in 1978. Possibly a form of *B. heracleifolia*. (1986: 54)

U037: Asia. Offered by Seed Fund. Cane-like; leaves green, flowers white and pink picotee on leafless stem. Dormant in winter. (1986: 54)

U038 = *B. chlorosticta* Sands: Sarawak, Borneo. Collected by B. L. Burt and A. M. Martin in August 1967. The begonia we have been calling *B. species ex Kew*, introduced through the Royal Botanical Gardens of Kew and into the United States by the late M.L. MacIntyre of England was determined to be a new species by Martin Sands of Kew. He named it *B. chlorosticta* in *Curtis's Botanical Magazine* 183(4) 133-37 and plate 827, Feb.. 1982. This was brought to our attention by Maurice Mason. The name means "green spotted." Shrub-like, stems succulent with slight swelling at lower nodes and scattered small, light green lenticels; leaves medium to dark green, patterned overall with distinct light green blotches, 3" x 6", ovate-oblong, inequilateral, glabrous; margin serrulate with a light green band, stipules green flushed red, glabrous, deciduous; flowers white with 4 small male tepals and 5 larger female tepals, bloom sparse, fall to winter. Terrarium culture is recommended. For articles and photographs in the *Begonian*, see Sept. 1976, p. 246; Sept. 1980, pp. 240-243; Sept. 1980, pp. 240-43; and Mar. 1984, cover and p. 27. (1982: 83) (1984: 25 cover; 1986: 54) (1990:137, = *B. chlorosticta*)

U039 = *B. heracleifolia* var. *nigricans*: Vera Cruz, Mexico. Collected by Stephen Morgan between Tampico and Orizabo in 1976 (coll. no. 5L), rhizomatous, leaves large, green with blackish green coloring along outer portions of blade, margin deeply lobed; petiole stout, long, pale green. Identified by Bob Cole. (1990: 137, = *B. heracleifolia* var. *nigricans*.)

U040: Bougainville, Papua New Guinea. Collected by John Womersley. Shrub-like plant found clambering over rocks in full sun at elevation of 2800'. Pink flowers. [1981: SF 76; 198] (1984: 124; 1986: 54. From 1984: 124: Apparently got its start from ABS members who obtained the seeds from John Scott an Australian member of the Round Robins. It has been reported that these seeds were from Bougainville Island, but also from Papua and from John Womersley. The plant of *U040* that I had seen was a terrarium specimen. In a very moist container it thrived, produced numerous air roots, and branched to fill the container. The leaves were small, and the reddish brown tone of the succulent stems was notable. There seems to be no connection between *Begonia U040* and *U057* other than being from New Guinea and perhaps the note connecting the two in the previous listing on page 85 (1984: *U057*) can be dispatched by growers of the plants who may send comments and observations to the U-number project director. Thelma O'Reilly will be happy to add information to the listing about the sources and descriptions of unidentified species. Write to her. (1984: 124; 1986: 54)

U041: Fortin, Mexico. Collected by Fred Barkley, rhizomatous; leaves green with soft white hairs, margin subentire; distinct black nerves on young plant disappear with maturity. It appears to belong to the *B. lindleyana* complex, although the rhizome is not erect. Scott Hoover collection number 346 = *B. 041*; identified as same by Joy Porter. (1986: 84)

U042: Peru. Source, J. Doorenbos. Offered in the Seed Fund in October 1980 as OT-11. Species related to *B. bracteosa*. [1980: SF OT-11 277] (1986: 54)

U043: Brazil. Source was a plant cutting brought into the United States by Sylvia Leatherman on her return from visit to Brazil in the late fifties. After propagation, this unusual species was distributed as B. J-11. It is grown under this same designation today - still unidentified. Thick stemmed, thickset, green, medium-sized rhizome-like stem sometimes crawls and roots into soil before growing erect, as high as 20", pale green lenticels and narrow trichomes between closely set nodes, 7-nerved leaves 5 1/2" x 8", upper surface medium to dark green with bronze highlights and iridescent, satiny sheen, glabrous, cupping under along outer portion, deeply cordate and overlapping at sinus, undersurface dark red, covered with

tiny, stiff red hairs; short narrow red trichomes are scattered on light green nerves, subentire margin is serrulate and ciliate, emerging new leaves red, and pleated resemble a cockscomb, petiole 8" - 12", light green with distinct horizontal bands of broad, lacerated, red scales at intervals over entire length, giving rise to nickname of "lariat begonia", flowers are white, in clusters held above foliage. 4 male tepals, peduncle green, patterned with red trichomes, fall flowering. See article *Begonian* Nov. 1961, p. 216; 1986: 54 photo) (1986: 55) [1986: SF S-09 126]. Photo *Begonias*, Thompson, p. 115. [2002 J-F SF JF02-U#043][2003: SF 36]

U044: Bombay. Offered by ABS Seed Fund. A thick-stemmed species with white flowers. Identified as *B. dipetala*. Description (based on original published by Graham and J.D. Hooker in *Curtis's Botanical Magazine* 55, Plate 2849 1828); Stem erect, tapering, grayish brown with a few small, round vermilion spots. Leaves elongated, asymmetrically obovate, acute and doubly serrate-dentate, slightly bullate, with white spots and having a short awl-shaped hair arising from center of a few spots, but when old, blached, smooth, veins prominent, especially below; petioles distichous, slightly channeled above. Cyme axillary, peduncles rather longer than the petioles and foliage; two nearly obsolete bracts on the female pedicel but none on the male. Flowers pink, dipetalous, large (female 1" broad by 3/4" long, male 3/4" in both directions). This species flowered in April 1828 at the Royal Botanic Garden, Edinburgh, where it had been sent by Dr. Johnstone from Bombay. (1986: 55) (1990: 137 = *B. dipetala*. Ident. by Arlene Peck.)

U045: Polynesian Village, Disney World, Florida. Offered in the Seed Fund October 1980 as OT-11. Tentatively identified as *B. cucullata*. (1986: 55) (1990: 137, = Tentatively *B. cucullata*). {Listed by Thelma O'Reilly as being identified as a hybrid. 2006: 36}

U046: Madagascar. Source, J. Doorenbos. Offered in the Seed Fund, October 1977 as Madagascar No. 4. Joy Porter reports, "I raised one seedling and kept it for two years. It was a rhizomatous-like, tuberous plant. It went dormant and came back several times before I lost it in the 1984 freeze." Mabel Corwin and Patrick Worley reported similar results. If anyone is still growing this species, please report on your plant and growing techniques. [1980: SF 143 Madagascar #4] (1986: 55)

U047: Lae, New Guinea. Collected in lowland rain forest near Scieer. Found in a track near Gambwabila, Ferguson Island area. B. U047 was applied to plants raised from seed distributed by Carrie Karegeannes who received it from John Scott as "Lae species 10832." John obtained it from Bernard Yorke, whose friend (unknown) collected the seed. A second source for this species was J. Doorenbos. This seed was offered in the Seed Fund, October 1978 as OT-3 and possibly May, 1979 as MY-7. It was also widely distributed through the Round Robins by Bernard Yorke. Shrub-like, succulent stems to 3" high; green leaves thin textured, lightly spotted white and red veined. In seedling stage, green cordate leaves are heavily spotted white with irregular silver frosting around the margins. Most of the silver color disappears as the plant reaches maturity. Plant habit and pink flowers are reminiscent of *B. incarnata*. Like *B. incarnata*, it is short-lived. <Lae species 10832> (1986: 56) [1978: SF OT-3; Possibly 1979: MY-7]

U048: No distribution under this number is known.

U049: Brazil. Collected by the late Ralph Spencer of California. Offered by the Seed Fund, June 1965 as "No. 2, Brazil species" with the following information: Angel-wing type with velvety leaves - plants found in dense forest at 300' elevation on the Rio Ribeira 250 mi. south of Sao Paulo. Shrub-like, 2'-3' high with furrowed, erect stems covered with short, fuzzlike, tawny hairs, leaves falcate, 1-2" x 8", upper surface dark green, sometimes bronzed, pubescent, undersurface red purple, pubescent including veins, margin ciliate, serrate and dentate, texture velvety; petioles 1/2" - 1", lanate; stipules 1/4" by 1/2"; acuminate, quickly drying, persistent. Flowers about 1" across, white, sometimes flushed pink; male flowers with 4 tepals, two large, ovate and 3 much narrower with scattered white to pink hairs on backs; female flowers with 5 tepals (occasionally 7), uniform size with hairs on backs, 3 wings, white flushed pink, one large, margins ciliate; soft hairs on peduncles and pedicels. The leaves of this species develop a distinct trait when the plant reaches its full potential; grown under optimum conditions, they fishtail into shaggy proliferations. It has been reported that *B. U035* and *B. U099* may be the same as *B. U049*. [1987: SF M-A9 38; 1990: SF 30-32] (1990: 137, = tentatively *B. juliana*. Ident. by Arnaud Marieres, France. Waiting for verification from the Smithsonian herbarium.) [2002 J-F SF JF02-U#049; 2003 SF 36; 2005: 25 Sf] {Mention by Doug Pridgen as growing well in Miami. 2005:69} {Identified by Thelma O'Reilly as being *B. juliana*. 2006: 36}

U050: Columbia. Collected by Helen Bailey on a trip. She supplied plant material to Dorothy Behrends, and hence to Pat Maley. Others also may still be growing this plant. Leaves are very large, 14" across. (1984: 85) {Photo 1990: 138.}

U051: Brazil. Imported by Wally Wagner. Shrub-like, compact, branching. Leaves lance shaped and hairy. Flowers white with red ovaries. Listed in Pat Morrison's catalog, received in 1980 as Brazilian species No. 2. <Brazilian Species #2> (1984: 85)

U052: Brazil. Imported by Wally Wagner. Listed in Pat Morrison's catalog received in 1980 as Brazilian species No. 3 and described as similar to *Begonia* 'Selover' but with larger leaves. Recommended for basket culture. <Brazil Species #3> (1984:85) (1984: 85)

U053: La Margarita, Vera Cruz, Mexico. Collected by Loren Whitlock who sent a cutting to Los Angeles State and County Arboretum. December 1976, with number 76P2077. Plant has creeping rhizome and large leaves. <76P2077> (1984:85)

U054: Mexico. Collected by Loren Whitlock who sent plant to Los Angeles State and County Arboretum with the collection number 76P378. Smaller than U053, but could be same species. <76P378> (1984: 85)

U055: Costa Rica. Collected by Martin Johnson in 1977 as seeds. Found in shallow ravine. Sent seeds to the Seed Fund. Entire plant is covered with fine short white hairs. Shrub-like, grows several feet tall. Propagates from a leaf. Distinct stipules are persistent, completely surround petiole, stay green and persist. Leaves similar to *B. egregia*. Flowers are white, females have five tepals, blooms atop tall peduncle well over foliage. [1982: SF S-01 122] (1984: 85) {Photo 1990: 138}

U056: South America. Seeds supplied by Selby Botanical Garden in February 1981. Leaves peltate, small, long pointed, margin lobed, veins palmate, blade plain green, flushed with red when young. Stems rosy, upward climbing. Unsupported stems die off. (1984: 85)

U057: Papua, New Guinea, near the Wowai River. Offered in the Seed Fund in June 1981 as JN-3. See U040. [1981 SF JU3 144] (1984: 85) [1986: SF M-A7 48] (1987: 100) [1989: SF 153-154; 1990: SF 153-155]

U058: Mt. Makiling, the Philippines. Imported by Martin Johnson. Shrub-like to 1 m tall. Leaves have prominent red veins on reverse. Flowers pink. (1984: 86; 1990: 137, = *B. cumingii* or a form of this species)

U059: Sabah, Malaysia. Collected by Bob Cole in fall of 1980. Shrub, 1 1/2 to 2 ft. tall. Stems green then turning woody. Leaves 6 by 2 1/2 in., cordate with acute point, silver with green along veins, hairs scattered on leaf surface. (1984: 86; 1989: 81 cover, 84-85-86; 1990: 137, = *U085* & *U093*) [1990: SF 188-190]

U060: Costa Rica/Peru. Offered in the Seed Fund, June 1981 as JN-1. Seeds supplied by Bob Wilson of Los Cruces Tropical Botanical Garden to Thelma O'Reilly. Seedlings damp off readily. (1984: 86) [1981: SF JU1 144; 1989 SF: 68-69]

U061: Sabah, Malaysia. Collected as seeds by Bob Cole, late 1980, near the city of Ranou. Cane-like to 4 ft. tall; leaves small, narrowly ovate. (1984: 86) (1987: 100)

U062: Calcutta, India. Obtained in 1980 by Bob Cole from a friend in Thailand who got it in Calcutta. Shrublike to 3 ft. tall. Leaves cordate, dark green with silver spots. (1984: 86; 1990: 9) {Photo 1990: 123, 158; this species may be best known for its hybrids created by Naron Stewart of Texas including *B.* 'Sinbad', 'Don Miller', and 'Maurice Amey'.} {02 M-J p. 113} {Mention by Bill Claybagh as having hybrids that do well in some sun in Houston. 2005: 29}

U063: Baler, The Philippines. Collected May 1981 as seeds by Martin Johnson and sometimes referred to as 'Baler No. 2.' Tall, shrub-like with leaves the size of *B.* 'Lucerna.' White flowers. <"Baler #2"> (1984: 124)

U064: Baler, The Philippines. Imported by Martin Johnson as seeds in May 1981. May also be labeled "Baler No. 3." Low growing and will climb. Vigorous grower once established. Leaves leathery, cordate with rather flat point, about 3" in diameter. Flowers pale pink, 3/4 in. long, staminate flowers have two round and two narrow opposing tepals, pistillate flowers have pinkish ovary with three greenish white triangular wings, one of which is much extended. Offered in the Seed Fund in September 1983. <"Baler No. 3"> [1983 SF S-010 131] (1984 124) [1986: SF S-010 126; 1989 SF 152-154 trail/scand] {Photo 1990, p. 140}

U065: Mindanao, The Philippines. Imported by Martin Johnson as seeds in 1981. Shrub-like plant with white flowers. Sets seed and dies in manner of annual plants. This may be the same species as U022. (1984: 125; 1990: 137 = *U022*)

U066: Species from Taiwan. Rhizomatous. Shell pink, rather large (2 in.) fragrant flowers. This is now determined to be the same plant that is designated U016. (1984: 125; 1990: 137, = U016)

U067: Nicaragua. Offered as OT-1 in the 1981 Seed Fund. Rhizomatous. Leaves manicate, rippled margin finely edged in red. Pink flowers in large cluster. <RZ #4547> [1981 SF OT1 215] (1984: 125) [1985: SF S-09 112; 1987: SF N-D3 163; 1989 SF 112-114] (1990: 137 = *B. bakeri*. Identified by RZ, other authors have placed *B. bakeri* as synonymous to *B. cardiocarpa* and *B. pruinata*. { In *Begoniaceae*, Ed. 2, manuscript as of 14 December 2000, Golding & Wasshausen, *B. bakeri* is now listed as a synonym for *B. cardiocarpa*.}

U068: South American species collected by Fred Barkley. This is the plant listed in Barkley & Golding, *Species of the Begoniaceae* as *B. heracleifolia* var. *pyramadilio* hort. and coming from Costa Rica in 1946. There had been herbarium specimens at Northeastern University and these may have been destroyed. The identification apparently was uncertain. It could be same as Guatemalan species species *U036*, offered in the Seed Fund, October 1982 as OT-2. A rhizomatous plant with all green leaves having 7-9 lobes and sparsely white hairy. The flowers are white to pale pink and appear in the spring. [1982: S-02 122] (1984: 125)

U069: Brazil. Collected as seeds by Jeffrey and Maggie Kent in 1982. Leaves are peltate, enormous. (1984: 125)

U070: Brazil. Listed in the Seed Fund, JA-2 in 1982. Similar to *B. vitifolia*, but with lax growth habit. Leaf texture is rough. Flowers are small, white, but inflorescence is large. [1982: SF JA2 15] (1984: 125)

U071: Paete, Laguna, the Philippines. A climbing plant to 2 m tall, flowers white. Imported by Martin Johnson in 1983(?). (1984: 125)

U072: Plant imported and distributed by Martin Johnson in 1983. This rhizomatous plant may be *rex* related or of *rex* type. Leaves are asymmetrical, cordate, lightly spotted along dark, pointed lobes, light green mid-area. (1984: 125; 1990: 137, = Tentatively *B. rex* hybrid, ident. by TOR.)

U073: Laguna. Sierra Madre Mountains, the Philippines. Imported by Martin Johnson as No. 50 in 1983. A climbing begonia with orange flowers. Leaves differ from *U026*. <#50> Trailing/scand, orange flwrs. (1984: 125; 1990: 137 = *B. oxysperma*, ident. by Mabel Corwin. Slight variegation on young leaves disappears with maturity.) {Listed by Thelma O'Reilly as being identified as *B. oxysperma*. 2006: 36}

U074: Lobo, the Philippines. Imported by Martin Johnson as No. 11 in 1983(?). Creeping habit Leaves variably marked. Stems, petioles, and peduncles rose colored. Male flowers show two rounded and two narrow tepals, with occasional blooms having a narrow fifth tepal. Color more intense when grown in strong light. [1984: SF JU-Ag1 87] (1984: 126) [1990: SF 109-110] {Photo 1990, p. 140} [2002 J-F SF JF02-U#074; 2003: SF 36; 2005: 25 SF] {02 M-Ju 205, photo by Janet Welsh}

U075: Polilio, the Philippines. Imported by Martin Johnson with No. 46. Leaves tiny, trilobed with occasional white spots on lobes. Stems reddish, habit trailing. <#46> (1984: 126; 1990: 139, = *B. aequata*, tentatively ident. by M. Thompson, verified by JDD. Additional seed collections from the Philippines, resulting in species of similar habit, have placed this entire group under further study.)

U076: Species from the Polilio, the Philippines. Imported by Martin Johnson as No. 45. Shrub-like, with deeply lobed leaves, delicate nature. Identified by R. Ziesenhenné as *B. incisa*, a plant which he grew in the 1940s from seeds furnished by Bessie Buxton. <#45> shrub, pink flowers. (1983:117; 1984: 126; 1990: 139, = *B. incisa*. Tracy McLellan questioned this identification after studying type illustration in the Annotated List. *B. U076* is under further study.) {2001: 216. Definitely not *B. incisa*. Remains unidentified.} {2003: 136, mention by Bill Claybaugh for palmately compound leaves} {200: 195, drawing mentioned.}

U077: Species from Lucban, the Philippines. Martin Johnson imported with No. 42. A climbing plant, leaves dull green with pink color evident along the veins and general rosy overtone to entire plant. Leaves ovate-cordate with six main veins. Flowers in clusters of five tiny buds. Male flowers show two pink oval petals and two narrow, elongated tepals. <#42>, trailing/scand. (1984: 126)

U078: Source unknown. Had been in general cultivation among members of Jacksonville Branch as "Taiwan Species". Offered by Logees as "Lubbersii hybrid" in 1980. Leaves very dark green with large silver oval spots, obtusate, glabrous, similar to *B. lubbersii*, dark red on reverse, to about 6 in. long. Bob Hamm found it very difficult to grow during hot weather. Carrie Karegeannes said this is probably the true *B. maculata*. (1984: 126). [1986: SF S-011 126, Brazil, cane, white flwrs] (1990: 139, = *B. maculata*, ident. by Carrie Karegeannes & TOR) {Listed by Thelma O'Reilly as being *B. maculata* var. *maculata*. 2006: 36}

U079: Baler, the Philippines. A climbing begonia imported in 1982 by Martin Johnson. Flowers red. Leaves differ from U011. (1984: 126)

U080: Species imported as seeds in November 1980 by Martin Johnson from Zamboanga, the Philippines, has small fragile, narrow leaves with metallic bronze, iridescent appearance. This shrub-like begonia grows 6 to 10 inches tall. The flowers are small, about three-eighths of an inch. The female blooms have five tepals. (1982: 83)

U081: A plant from Baguio, the Philippines, imported by Martin Johnson. A rhizomatous begonia of the *B. rex* type, it has a jointed rhizome. Leaf blades are light iridescent green showing a flush of red coloring along the veins and occasional white spots. Leaves are cordate with overlapping lobes. Mature leaves measure 7 by 11 inches. The marginal zone is red, and there are red hairs on the veins on the underside of the leaves. The petioles are also red-flushed and bear red hairs. The buds are pink. Male flowers are longer than 1 inch and have four tepals. Martin Johnson reported that one leaf developed a plantlet in the center. In general this plant grows well on his open bench. Further study will be necessary to determine whether this is a species or a hybrid. (1982: 83; 1990: 139, = Tentatively *B. rex* hybrid identified by TOR.)

U082: Species from the Philippines that was distributed at the ABS Ventura Convention plant sale bearing the label "*B. nigratorum?*" This begonia is closely related to U006, but is not the same. It is a creeping plant, not rhizomatous, approximately 1 inch between nodes and it roots at the nodes. Leaves are cordate, 2 inches by 2 inches with silver blotches between the veins. The flowers are white, lightly flushed with pink on the reverse. The male blossom has two ovate tepals about a half-inch wide and two narrow tepals about a quarter-inch wide. The peduncles are 4 inches tall. Small, whitish, papery stipules drop off readily. It bloomed when very young. Imported by Martin Johnson as seeds from a cultivated plant in October 1980. (1982: 83; 1990: = Tentatively *B. nigritarum*. Seed from the Philippines under this label has produced plants with differences in leaf color and shape. For an interesting overview of *B. nigritarum*, read article by JDD in *Begonian* 1990 326-327 where he tentatively identifies the species that we grow as *B. nurii* = *B. nigritarum*) {Photo: 1990, p. 141.}

U083: A tall, corky, thick-stemmed begonia with small, bright green splotches randomly scattered over the jointed stem. Introduced into cultivation in Florida by Francis Michelson. The plain green leaves are 5 inches x 6 inches and probably will grow larger. The leaves have red veins with a red "eye" at the junction of the blade and stem. The leaves are glabrous, entire-subentire, and widen at the edge exactly opposite the junction. New growth is covered with fine fuzz that disappears with age. (1982: 83) [2002 J-F SF JF02-U083; 2003 SF 36; 2005: 195 SF; 2006: 28 SF]

U084: Upright rhizomatous species from Colombia. Leaves are cordate and brown felted on the underside. This light brown soft felt covers both surfaces of young leaves; the upper surface becomes sparsely pubescent. The petioles are green with soft, tangled hairs. Leaves show fine red edging, reddish veins, and a red dot at the leaf stem junction. The stipules are brown with parallel lengthwise nerves. (1982: 89; 1990, = *B. sericoneura*, ident. by TOR)

U085: Cane-stemmed species from the Philippines brought in Los Angeles by Rex and Pat Christianson in December 1981. The leaf blades are ovate with cordate basal lobes and are light silvery green accented by dark green veins. The leaf margin is very narrow, minutely crenate, red, and sometimes ciliate. The blade is punctuated by red bristles. The petioles are red. Leaves measure 3" x 6". (1982: 89; 1990: 139 = *U059* & *B. U099*.)

U086: Species from the Philippines found as a volunteer seedling by Patrick Worley on a Melastome plant sent by Martin Johnson in Fall 1980. The begonia has a flat creeping rhizome. Its 4 inch x 5 inch green leaves, covered with very fine white hairs, are cordate with indented veins. The petioles are light green, but may be flushed when young. The flowers are medium pink and on peduncles reaching just above the foliage. Male blossoms have four tepals, two being rounded and two small and narrow, arranged in opposite pairs. One of the narrow tepals is absent on the female flowers. (1982: 89; 1990: 139 = Tentatively *B. luzonensis*, identified by JDD) {Photo: 1990, p. 143}

U087: Seeds sent to Patrick Worley by Hikoichi Arakawa labeled "From Sumatra." The rhizome is somewhat red and creeping. Leaves are peltate and round, but with one long acuminate point, shiny deep green on top, and red on reverse. The cupped leaves measure 3 inches by 3 inches when flattened. A red dot marks the top surface at the leaf junction with the stem. The blossoms are pink with the ovary a deeper rose color. The ovary is three winged, with each of the wings evenly rounded. The male flowers have four tepals, two narrow and two rounded; the female blossoms have three or four tepals. Petioles and peduncles are a striking deep red color. Bractlets occur at each branching of the inflorescence. (1982: 89; 1990: 139 = *B. coriacea*, ident. by C. Karegeannes & TOR]

U088: Brazil. Collected as seeds by Jeffrey Kent in February 1982 near Rio de Janeiro. Leaves dark green, palmate, compound (fully divided), dark red to purple underneath, sparsely hairy. (1984: 126)

U089: Species from West Africa from the collection of E. Irmscher, but apparently unpublished. See description in January 1980, page 13 in article by J. Doorenbos: "The Yellow-flowering Species From Africa." Photograph on that cover. <syn: 1022 jd - rhiz distinctive foliage - yellow - MLT1> <rhiz yellow terrarium cult. - Kartuz 1984> (1984: 126). {2003: 58, grows in Ft. Worth Botanic Garden} {Listed by Thelma O'Reilly as being *B. quadrialata* ssp. *nimbaensis*. 2006: 36}

U090: Baguio, Philippines. Plant purchased by Martin Johnson, October 1980. Rhizomatous, short, creeping rhizome; ovate leaves are slightly overlapped at leaf base, dark olive green with large silver areas between nerves and small silver dots on the outler leaf area, 7-8 main nerves, finely ciliated on subentire margins; red flushed peduncles are covered with white hairs; flowers are pink. Probably a *B. rex* hybrid. (1988: 81; 1990: 139, = tentatively *B. Rex* hybrid, ident, TOR. {Photo: 1988: 81}

U091: Cavinti, Philippines. Seed imported by Martin Johnson, March 1981 under number MJ 51. Green leaves with white spots. (1988: 81)

U092: Luzon, Philippines. Collected by Martin Johnson, October 1980. Shrub-like; large freely branching shrub. (1988: 81)

U093: Mount Banahao, Philippines. Plant purchased by Martin Johnson. October 1980. Shrub-like; stems green, lenticellate, with scattered white-to-red villi which disappear on lower section as plant ages; leaves ovate, acuminate, shallowly cordate, 5 1/2" x 3 1/2", slightly puckered upper leaf surface is olive green with silver overlay and scattered light red, short hairs, green veins become red as veins mature, green under surface is flushed red with raised, red veins and light red hairs overall, 7-8 nerved, marginally ciliate, finely red edged; stipules persistent, pale green, sometimes flushed pink, 1/2" - 3/4", setiferous, keeled; petioles 2-3", green flushed red with white-red scattered villi; staminate flowers satiny, blush pink with 4 tepals, 2 ovate and 2 narrow, rarely opening, 3/4" x 1/2"; pistillate flowers 1 1/2", 5 satiny, blush pink tepals, 1 tepal narrow and occasionally missing, contrasting bright rose-pink ovary has 3 wings of equal size; peduncles are green flushed pink with occasional villi, pedicels are bright pink. Flowers are fragrant and profuse, everblooming under ideal conditions. *B. U093* is identical to *B. U085*. It shares an interesting relationship with *B. U059*; it is also grown under the following labels: *B. U059*, *B. U085*, *B. U092*, and 'Pinkie.' For additional information see *Begonian* Jan-Feb 1988, pp. 25-26. (1988: 25; 1988: 81; 1989: 81 cover, 84, 85, 86; 1990: 139, = *B. U059* and *B. U085*.)

U094: Peru. Collected by Stephen Morgan to the east of Villa Rica, 850 m. alt. September 1982. Collector's number is "Stephen Morgan PC 36". Seed was sent to Patrick Worley and Phyllis Bates. Cane-like, stems to 1 m. high; leaves glabrous, reddish, flowers pink. No distribution under this number. Seed not viable. <PC36> (1988: 81)

U095: Peru. Collected by Stephen Morgan. September 1982 near the site where *B. U094* was collected. Collector's number is "Stephen Morgan PC27." Seed was sent to Patrick Worley and Phyllis Bates. Cane-like, few stemmed, rarely branching, 3-4' high, prominent stipule scars and undeveloped red leaf appendages give glabrous stems an interesting appearance: glabrous, bright green leaf are 3 - 4" x 6 - 8", with prominent red spot at leaf-petiole junction, 9 light green nerves radiate from the red spot, under leaf surface usually flushed orange red, finely ciliated margin edged orange red, dentate, serrulate, subentire; green petioles 2" - 3", glabrous; peduncle 5-10", glabrous; 2 quickly deciduous bracts completely wrap around the bud clusters as the inflorescence starts to elongate, followed by 2 more sets of bracts before the buds mature into a showy scarlet-red, rather flat topped inflorescence. For additional information about *B. U095* See *Begonian* cover Nov-Dec 1986 and "A Peruvian Puzzle" pp. 154-155 of same issue. <PC27> shrub, red/orange flowers (1986: 154; 1987: 11 photo) [1987; SF n-D7 163] (1988: 82) [1989: SF 68-69; 1989: 112, Previous entry is in error] (1990: 139, = *B. roezlii*, ident. by L.B. Smith)

U096: Carpish, Peru. Collected by Stephen Morgan, September 1982. Collector's number is "Stephen Morgan PC44." Seed was sent to Patrick Worley and Phyllis Bates. Collector described plant as a climber, very showy, masses of bright red flowers. No distribution under this number. Seed not viable. <PC44> (1988: 82)

U097: Brazil. Seed collected by Jeffrey Kent, February 1982. Shrub-like; hirsute with elongated leaves. Plants did not survive. Patrick Worley reports "Probably a known species." No distribution. (1988: 82)

U098: Brazil. Seed collected by Jeffrey Kent, February 1981. Shrub-like; glabrous leaves elongated and star shaped. No distribution.

U099: Seed of this begonia was sent to the Seed Fund by Ruth Wills, OK, who received her plant from Kathlyn Calvert, OK. Shrub-like; sparsely hairy, mature leaves are 1 1/2" x 2 1/2" x 6 - 9" with "fishtail" lobes at apices; leaf undersurface is green with red nerves; margin is dentate; habit is like *B. U049*. *B. U099* grown in Mabel Corwin's garden at Vista, CA is identical to *B. U049*. Seed listed in *Begonian* May-June 1983, p. 86. For additional information see *Begonian* cover March-April 1986 and inside article "The Pot of Gold" p. 42. Shrub, white flowers. [1983: SF M-J1 86] (1988: 82; 1990: 139, = *B. U035* & *B. U049*.)

U100: El Valle, Panama. Seed collected by Roberto Brin, February 1983. Rhizomatous, leaves pale green and pubescent, flowers white. See Seed Fund listing M-J 2, *Begonian* May-June 1983. [1983: SF M-J2 86; 1987: SF J-F4 24] (1988: 82) [1989 SF 188-189]

U101: Laguna, Philippines. Plant purchased by Martin Johnson, February 1983. Rhizomatous, bronze leaf blades with green veins, small pink flowers. Seedlings from original plant were grown by Bob Haussler, CA and produced two forms, one with bronze leaves and light green veins, and one with plain green leaves. (1989:101)

U102: Mount Banahao, Philippines. Seed imported by Martin Johnson, February 1983. Collected at 4000 feet. Martin reports that this species has a creeping habit. (1989: 101)

U103: Bolivia. Seed distributed by Rudolf Ziesenhenné under his number RZ 6577. Tuberous, stems green, succulent, 2-3 feet high, slender requiring support; leaf blades 3-5 x 1 1/2 to 3 inches, medium green, glabrous, lobed, serrulate, 7-8 veined, stipules 1/4 - 1/2 inches, reticulate, rather persistent; flowers white sometimes flushed pink, glabrous, 1 1/2 inches across, male flowers are 4 tepaled, female flowers are 6 tepaled, 4 winged with an unusual 4 celled ovary, 2 small bracteoles; peduncles 8 - 12 inches, reddish tan, sparsely lenticillate; pedicels 1/2 - 3/4 inches. July 4, 1988 Carrie Karegeannes and I visited Dr. Lyman B. Smith at the Smithsonian Herbarium. We checked the Bolivian herbarium specimens, but found nothing to match my specimen of *B. U103*. Dr. Smith said it could be a new species. I find that it likes to grow as a hanging plant in preference to staking which is necessary if grown upright. The perennial tubers are fast growers, each filling an eight inch pot within a few years. A dormant tuber I measured in Rudy's nursery was nine inches across. See SF listing N-D7, *Begonian* November-December 1983 and N-D1, *Begonian* November- December 1987. [1983 SF N-D7 150] (1985: 18) [1987: SF N-D1 163] (1989: 101 photo) [1989: SF 235-236; 2002 N-D 226-7 SF; 2004: 180 SF; 2005: 25 SF]

U104: Santa Rosa, Costa Rica. Seed collected by Lynda Goldsmith 1984 under her number LG 2. Rhizomatous; small rhizome that tends to crawl across container then grow partially upright; leaf blades green puberulent above, short, matted, wooly hairs below; petioles 5 inches, scattered wooly hairs; stipules persistent, reticulate, setiferous; male flowers white, 2 tepals, glabrous; peduncles 1 1/2 inches, puberulent. See S.F., listing, M-A 1, *Begonian*, March April 1984. <LG2> [1984: M-A1 35] (1989: 102)

U105: Seed supplied to S.F. by Professor J.D. Doorenbos, 1984. Shrub-like; habit lax; small green leaves; large clusters of white flowers. A good basket plant. See S.F. listing M-A8, *Begonian*, March-April 1984. [1984 SF M-A8 35] (1989: 102) [1989: SF 153] (1990: 139 = *B. holtonis*, by JDD)

U106: Panama. Collected by Roberto Brin near the road from Panama City to Colon. Rhizomatous; leaf blades medium green, shallowly lobed, cordate, glabrous or nearly so, convex, marginated with red hairs; petioles pale green, somewhat pilose. Terrarium care required. See S.F. listing M-A 9, *Begonian* March-April 1984. [1984 SF M-A9 35; 1989 SF 68-69] (1989: 102) [1990: SF 109-110]

U107: Panama. Seed collected by Roberto Brin near road from Panama City to Colon. Rhizomatous; leaf blades medium green, shallowly lobed, cordate, glabrous or nearly so, concave; petioles pale green, somewhat pilose. Terrarium care required. See S.F. listing M-A10, *Begonian* March-April 1984. [1984: SF M-A10 35] (1989: 102) [1989: SF 113-114]

U108: Panama. Seed collected by Roberto Brin near road from Panama City to Colon. Rhizomatous. Descriptions same as *B. U107*. Brin reports that leaves are large in habitat. See S.F. listing M-A11, *Begonian* March-April 1984. [1984: SF M-A11 35] (1989: 102)

U109: Records incomplete. No distribution. (1989: 102)

U110: Records incomplete. No distribution. (1989: 102)

U111: Panama. Seeds collected by Roberto Brin from Madden Dam area February 1984. Rhizomatous; leaf blades green; flowers pink. Seed sold at 1984 ABS Convention, Dallas, Texas. (1989: 102)

U112: Panama. Seeds Collected by Roberto Brin near El Valle. Rhizomatous; leaf blades large, dark green, pubescent. See S.F. listing M-J3, *Begonian* May-June, 1984. [1984: SF M-J3 59] (1989: 102)

U113: Panama. Seed collected by Roberto Brin near El Valle. Rhizomatous; seed sold at 1984 ABS Convention, Dallas, Texas. (1989: 102)

U114: Panama. Seed collected by Roberto Brin near El Valle. Rhizomatous. See S.F. listing M-J4, *Begonian* May-June 1984. [1984: SF M-J3 59] (1989: 102)

U115: Panama. Seed collected by Roberto Brin from cultivated garden plant near El Valle. Thick-stem; leaf blades green above, red below; pink flowers. Identified as *B. multinervia* by Professor Doorenbos and Thelma O'Reilly who collected the same form with bicolor leaves in Costa Rica, 1977. See S.F. listing M-J5, *Begonian* May-June 1984. (1984: SF M-J5 59; 1986 SF S-012 126; 1989: SF 68-69; 2003: SF 36] (1989: 102; 1990: 139 = *B. multivervia*. Tentatively ident. by RB, verified by TOR. This is the same form (leaf underside red) collected by O'Reilly in Costa Rica, 1977)

U116: West Sepik Province. New Guinea. Prof. Doorenbos sent plant cuttings to Mabel Corwin in 1982. Shrub-like; leaf blades 3 x 3/4 inches, dark green, glossy, with prominent, stiff, dark red trichomes scattered above, light green flushed red below, margin edged with a narrow red band and cut in an angular pattern; stems red with short hairs; male flowers pink with 2 tepals, female flowers pink with 5-6 tepals, ovary flushed pink with 3 wings. Terrarium care required. <syn #1166 jd - shrub distinctive foliage 1979 - MLT1> (1989: 102; 103 picture) {Listed by Thelma O'Reilly as being in section *Petermania*. 2006: 36}

U117: Panama. Seed collected by Roberto Brin near El Valle. Rhizomatous, leaf blades green, 8 x 5 inches, hirsute, serrulate marginally, apically acuminate, shallowly cordate. See S.F. listing M-J7, *Begonian* May-June 1984. Identified as *B. villipetiola* by Prof. Doorenbos. Dr. Kathleen Burt-Utley determined that *B. villipetiola* is a synonym of *B. urophylla* in *Tulane Studies*, published in 1985. [1984: SF M-J7 59] (1989: 103) [1990: SF 30-32] (1990: 139 = *B. urophylla*, ident. by JDD)

U118: Panama. Seed collected by Roberto Brin near El Valle. Rhizomatous; description similar to *B. U117*. Identified as *B. urophylla* by Prof. Doorenbos. See S.F. listing M-J8, *Begonian* May-June 1984. [1984: SF M-J8 59] (1989: 103) (1990: 139 = *B. urophylla*, ident. by JDD)

U119: Panama. Seed collected by Roberto Brin near El Valle. Rhizomatous, description similar to *B. U117* and *B. U118* except leaf blades are smaller. See S.F. listing M-J9, *Begonian* May-June, 1984. [1984: SF M-J9 59] (1989: 103)

U120: Panama. Seed collected by Roberto Brin near La Mesa. Shrub-like; leaf blades 6 x 3 inches. A large plant with beautiful foliage. See S.F. listing M-J10, *Begonian* May-June 1984. [1984: SF M-J10 59] (1989: 103) (1990: 139 = tentatively *B. estrellensis*, by RB)

U121: Panama. Seed collected by Roberto Brin near El Valle February 1984. Rhizomatous; leaf blades 7 x 5 inches, green, sparsely hirsute, marginally serrulate, apically acuminate, cordate (1984 M-J11, 1989: 153-154), identified as *B. urophylla* (syn. *B. villipetiola*) by Prof. J. Doorenbos. [1984: SF M-J11 59] (1989: SF 153-154) (1990: 134-139, Panama, RB collector, = *B. urophylla*, ident. by JDD)

U122: Caldas, Columbia. Seed collected by Scott Hoover January, 1984 by a stream margin along road from Fresno to Manizales. Elevation 7800 feet. Shrub-like. (1990: 134)

U123: Caldas, Columbia. Seed collected by Scott Hoover January 1984 by a stream margin about 35 km. west of Fresno on road to Manizales. Elevation 9700 feet. Shrub-like. Identified as *B. urticae*. (1990: 134-139)

U124: Caldas, Colombia. Seed collected by Scott Hoover January, 1984 along road to Manizales. Elevation 9000 feet. shrub-like. Identified as *B. urticae*. (1990: 134-139)

U125: Ingambato, Mexico. Seed collected SW of Toluca. Elevation 700 m. Distributed by Patrick Worley. Rhizomatous; leaf blades 6 x 4 inches, lettuce green, shiny, deeply cordate, sparsely pubescent above, lanate below. Petioles 7-9 inches, light green, lenticellate, sparsely lanate near apex. Bracts persistent. Staminate flowers white, 2 tepaled, glabrous, pedicels pale green to pink, 1/2 inch. Pistillate flowers white, 4 tepaled, occasionally 3, glabrous, pedicels same as staminate pedicels, bracteoles quickly deciduous, wings 3. This species remains dormant 5-7 months, annually. (1990: 135)

- U126:** Choco, Colombia. Seed collected by Scott Hoover January 1984 past El Carmen along road to Quibdo. Elevation 4800 feet. Shrub-like. Tentatively identified as *B. holtonis*. Some reports disagree with this identification. (1990: 135-139)
- U127:** Choco, Colombia. Seed collected by Scott Hoover January 1984 from a rocky stream area along road from El Carmen to Quibdo. Elevation 4000 feet. Shrub-like; stems succulent, leaf bases green, puberulent above, pleated effect. Difficult to cultivate. (1990: 135)
- U128:** Choco, Colombia. Seed collected by Scott Hoover January, 1984 along roadside from El Carmen to Quibdo. Elevation 3700 feet. Shrub-like. Identified as *B. fischeri*. (1990: 135-139)
- U129:** Antioquia, Colombia. Seed collected by Scott Hoover January 1984 along new highway from Medellin to Bogota. Elevation 5100 feet. Shrub-like. Identified as *B. fischeri*. (1990: 135-139)
- U130:** Cundinamarca, Colombia. Seed collected by Scott Hoover January, 1984 along road to Bogota. Elevation 600 ft. Shrub-like. Stem glabrous; leaf blades 1 1/2 x 3 1/2 inches, medium green, glabrous above, hairs on nerves below margin subentire, serrulate. Petioles 1/2 - 3/4 inches, green flushed red, sparsely hairy. Stipules 1/2 x 3/4 inches, pale green, glabrous, keeled. (199: 135)
- U131:** Cundinamarca, Colombia. Seed collected by Scott Hoover January, 1984 along road to Fusagasuga. Elevation 8700 feet. Shrub-like. Identified as *B. ferruginea*. (1990: 135-139)
- U132:** Cauca, Colombia. Seed collected by Scott Hoover January 1984 near waterfall along road from Balboa to Argelia. Elevation 7700 feet. Shrub-like. Identified as *B. kunthiana* aff. (1990: 135-139)
- U133:** Cauca, Colombia. Seed collected by Scott Hoover January 1984 at shaded stream margin near road along highway from Balboa to Argelia. Elevation 7600 feet. (1989:153-154.) Shrub-like. Identified as *B. holtonis*. [1989: SF 153-154] (1990: 135-139)
- U134:** Cauca, Colombia. Seed collected by Scott Hoover January 1984 at stream margin along road from Balboa to Argelia. Elevation 5800 feet (1989: 68-69) Identified as *B. holtonis*. [1989: SF 68-69] (1990: 135-139)
- U135:** Pichincha, Ecuador. Seed collected by Scott Hoover January 1984 along trail above river crossing highway to Santa Domingo de Los Colorados. Elevation 5600 feet. Shrub-like. Identified as *B. foliosa* var. *foliosa* by Prof. J. Doorenbos. (1990: 135-139)
- U136:** Pichincha, Ecuador. Seed collected by Scott Hoover January, 1984 at a waterfall area on road to Santa Domingo de los Colorados. Apparently a highly restricted endemic species. Elevation 5200 ft. (1985: Cover; photo, 30-31) In 1987 Don Miller, Texas, reported that *B. U136* which was of great interest did not survive. He shared the following information: "I have just returned from a collecting trip to Ecuador and found what looks like *B. U136*. It was collected near Apuela at about 7800 feet elevation, growing in a clay-like soil, on a vertical road side bank with water dripping down. It is fantastically beautiful. I lost three seed grown plants in the glass house, others are in a terrarium." Later he reported that he sent the lone survivor to a friend, hoping it would keep alive under different climatic conditions. (1985: 25 cover, 30-31, photo; 1990: 176)
- U137:** Pichincha, Ecuador. Seed collected by S. Hoover January 1984 in gravel along a deeply shaded stream bed 24 km. from bridge at bottom of old Quito road. Elevation 6000 ft. (1990: 176)
- U138:** Pichincha, Ecuador. Seed collected by S. Hoover at stream margin edge along old Quito road. Elevation 6800 ft. (1984: JA3, 87.) [1984: SF Ju-Ag3 87, Section Casparya] (1990: 176)

U139: Napo, Ecuador. Seed collected by S. Hoover February 1984 at a riverside embankment past Banos. Elevation 4100 ft. Shrub-like; about 30 cm high with hairy, spreading, zig-zag branches. Leaves when in bud covered by the stipules which are large (20-30 mm long and 12-15 mm broad) but are soon shed. Petioles short (10-15 mm), hairy. Leaf blades strongly asymmetrical, up to 10 cm long and 5 cm wide, entire, upper surface smooth, dark green, under surface lighter, hairy on the veins. Inflorescence 3-5 cm. across, 8-12 flowered, on a 2 cm long stem. Flowers about 1 cm across, white. Male flowers with 4 sepals, two wider than long and two much smaller and narrower, anthers numerous, lanceolate with very short filaments. Female flowers with 2 broad sepals (occasionally an additional narrow one), styles compact, much branched. Ovary covered by roundish bracts, 2 placentas in each locule. Fruit without bracts, with one large blunt wing and two smaller ones. (1984: JA4, 87.) Identified as *B. cryptocarpa*. Description and identification supplied by Prof. Jan Doorenbos. [1984: SF Ju-Ag4 87] (1990: 139-176)

U140: Napo, Ecuador. Seed collected by S. Hoover February 1984 along a trail through forest above river past Banos. Elevation 4000 ft. Shrub-like. Identified as *B. buddleiifolia* by S. Hoover. (1990: 139-176)

U141: Napo, Ecuador. Seed collected by S. Hoover in February 1984 along dry stream bank 51 km from Puyo to Tena. Elevation 2800 ft. Shrub-like; leaves above olive bronze with white spots when young; stems lean apically, slender, rather short; flowers small, greenish white with 4 male tepals, 2 ovate, 2 elliptic, 5 female tepals nearly equal in size. Greenish white ovary with 3 wings (occasionally an additional narrow one). (1984: JA5, 87) Identified as *B. maynensis* by T. O'Reilly. [1984: SF Ju-Ag4 87] (1990: 139-176 = *B. maynensis*, ident. by TOR during visit to Marie Selby Botanical Garden in March 1985.)

U142: Napo, Ecuador. Seed collected by S. Hoover February 1984 along stream margin past Tena on road to Bolza. Elevation 4700 ft. (1990: 176)

U143: Napo, Ecuador. Seed collected by S. Hoover February 1984 along roadside drain ditches and stream margins past Tena on road to Baeza. Elevation 6500 ft. This collection contained two species. (1990: 177)

U144: Napo, Ecuador. Seed collected by S. Hoover February 1984 at a stream margin along road to Baeza, 72 km past Tena. Elevation 6000 ft. Two species were included in this collection. *B. U144* = *B. glabra*. The second species, *B. U144-B* remains unidentified. (1990: 139-177)

U145: Napo, Ecuador. Seed collected by S. Hoover February 1984 at a drain ditch along roadside of highway from Baeza to Largo Agrio. Elevation 6100 ft. Shrub-like. Identified as *B. maynensis* by T. O'Reilly.

U146: Napo, Ecuador. Seed collected by S. Hoover February 1984 from moderate population distributed along roadside embankment past Santa Barbara along road to La Bonita. Elevation 7700 ft. Shrub-like. Poor germination reported. T. O'Reilly observed Mabel Corwin's reddish leaved seedling (1/4 - 1/2 inches high). They were delicate and gradually all damped off. Tentatively identified as *B. secunda* by S. Hoover. (1990: 139-177)

U147: Napo, Ecuador. Seed collected by S. Hoover February, 1984 from a small population along roadside embankment on road from Santa Barbara to La Bonita. Elevation 7000 ft. Shrub-like. Sparse germination, slow growth (1 inch in 6 months) reported. (1985: JA6, 87; 1989: 153-154.) Collection records stated that this species was same as *B. U139*. M. Corwin's seeds of *B. U139* and *B. U147* differed. [1984: SF Ju-Ag6 87, Section Ruizopavonio; 1989: SF 153-154] (1990: 177).

U148: Napo, Ecuador. Seed collected by S. Hoover February, 1984 from a very small population in a shaded drain ditch along roadside above Sibundoy, a small village above La Bonita. Elevation 7600 ft. Shrub-like. Identified as *B. urticae* by S. Hoover. (1990: 139-177)

U149: Narino, Colombia. Seed collected by S. Hoover February, 1984 along trail above San Juan river near Maldonado, Carchi, Ecuador. Elevation 5200 ft. Shrub-like. Identified as *B. maurandiae* by S. Hoover.

U150: El Valle, Panama. Seed collected by Roberto Brin in 1984 from a cultivated garden plant. Rhizomatous; cleft leaves green and brown, similar to *B. heracleifolia* (1984: MJ8, 59; 1989: 113-114.) Identified as a form of *B. heracleifolia*. (1990: 139-177) [2003 SF 36]

U151: Peru. Seed supplied by Prof. J. Doorenbos in 1984. Shrub-like; small plant, all parts covered with white hairs. (1984: J-A8, 87; 1986: SO13, 126; 1989: 153-154.) Identified as *B. subvillosa* (U008). [1984: SF Ju-Ag8 87; 1986 SF S-013 126; 1989: SF 153-154 semp] (1990: 142 = *B. subvillosa* (U008); 1990:177)

U152: China. Mildred L. Thompson received a leaf of this species from Masuo Yamada in the fall of 1983. He originally received it from Kunming Botanical Gardens in China. The following description was written by M. Thompson and published in the Eastern Regional Newsletter. "The leaves have deep tones of green-tinted gun metal silver with a deep chocolate brown pattern along the main veins that resembles *B. masoniana*: however, *B. U152* has a band of chocolate brown along the edges. The mature leaves measure 7" x 4 1/2" and are ovate with a cordate base and an acuminate apex; the margins are toothed and edged with short red hairs. The main veins are depressed; the textured surface is covered with compact, tiny elevations with a short red hair on top of each elevation. The leaf undersurface is light silver green with wine red markings along the main veins. The light green petiole is covered with deep pink hairs." The name of this species was published in *Begoniaceae, Part II: Annotated Species List, Corrections and Additions* published September 1988 by Jack Golding. *B. masoniana* Irmscher var. *maculata* S.K. Chen, R.X. Zheng, D.Y. Xia, *Acta Botanica Yunnanica*, 8 (2): 222, 1986 China. Verified by Carrie Karegeannes and Thelma O'Reilly. (1990: 142) {Photo 1990: 141}.

U153: Zamboanga, Philippines. Seed collected by Martin Johnson, 1983. Described by M. Johnson as cane-like or shrub-like with pink flowers.

U154: Las Cascadas (The Waterfalls) Panama. Seed collected by Roberto Brin in the Forest Reserve 1985 (1985:62, 1989 68-69.) Rhizomatous. Plant blooming without leaves at the end of the dry season in habitat. [1985: SF M-J7 81; 1989: SF 68-69]

U155: Las Cascadas, Panama. Seed collected by Roberto Brin along road to Madden Dam, 1985. (1986: 18; 1989: 68-69). Rhizomatous. Rhizome repent, internodes very short with trichomes. Leaf blades medium green, ovate, shallowly cordate and lobed, dentate, ciliate, sparsely pilose, 7 nerved. Petioles light green, lenticellate, pilose. Stipules quickly drying, persistent, apically acuminate, sparsely pilose, barely keeled. Staminate flowers white, 2 long, narrow tepals; pistillate flowers white, 2 tepals, occasionally 3, ciliate and serrulate; white ovary has three unequal wings, one larger and distinctly triangular. In Southern California this species requires an enclosed atmosphere to avoid dormancy. Tentatively identified as *B. plebeja* by Thelma O'Reilly. [1986: SF J-F9 18; 1989: SF 68-69]

U156: Las Cascadas, Panama. Seed collected by Roberto Brin 1985. (1986: 18, 1989: 68-69.) Rhizomatous. Leaves green, 7" x 4", shallowly lobed. [1986: SF J-F10 18; 1989: SF 68-69]

U157: Las Cascadas, Panama. Seed collected by Roberto Brin in the Forestal Reserve between Summit Gardens and Madden Dam, 1985. (1985: 62) Collector commented, "I like this one." This species is identical to U155. See description for B. U 155. Tentatively identified as *B. plebeja* by T. O'Reilly. [1985 SF M-J8 62] (1990: 142 = Tentatively *B. plebeja*, ident. by TOR)

U158: Panama. Seed collected by Roberto Brin near Las Cascadas, 1985 (1986: 18; 1990: 30-32.) Rhizomatous. Leaves green, 5" x 3", shallowly lobed. [1986: SF J-F11 18; 1990: SF 30-32]

U159: Panama. Seed collected by Roberto Brin near Las Cascadas, 1985. (1986: 18, 1989: 113-114.) Rhizomatous. Leaves green, 5" x 3", shallowly lobed. [1986: SF J-F12 18; 1989: SF 113-114]

U160: Panama. Seed collected by Roberto Brin near Las Cascadas, 1985. (1989: 153-154.) Shrub-like. Leaf blades green, small and delicate. Tentatively identified as *B. flipes* by R. Brin. [1989: SF 153-54]

U161: Panama. Seed collected by R. Brin near Madden Dam, 1986. (1986: 18, 1989: 68-69) Rhizomatous. Leaf blades green, thinly textured. A print from Jan Goodwin, shared by Joan Campbell, illustrates a strong similarity between *B. U155*, *159*, and *161*. [1986: SF J-F13 18; 1989: SF 68-69]

U162: Merida, Venezuela. Seed collected by Lynda Goldsmith at Mitisus. (1985: 62; 1990: 30-32; 1990 142.) Shrub-like. Stems green, branching, lenticellate, glabrous, 4-6 feet, turning woody with age. Leaf blades ovate, glabrous, dark green above, light green flushed red below, serrulate, crenulate, ciliolate, 9-11 nerved. Petioles tannish green, 1/2-3/4 inches, channeled, glabrous. Stipules persistent, acuminate. Flowers white flushed pink create a vivid contrast to dark pink ovaries; large, floriferous, hanging inflorescences. Tentatively identified as *B. meridensis* by L. Goldsmith. [1985: SF M-J9 62; 1990: 30-32] (1990: 142 = Tentatively *B. meridensis*)

U163: Merida, Venezuela. Seed collected by L. Goldsmith at Trujillo. (1985: 62; 1989: 153-154; 1990: 142.) Thick stem. Leaf blades medium green, 6 x 9 inches, ovate, sparsely setulose above, glabrous below, shallowly lobed, serrulate, ciliolate. Petioles green, glabrous, 4-5 inches, white, short trichomes form a sparse cuff at petiole summit. Stipules green, quickly drying, persistent, strongly keeled, 1 1/4 inches. Flowers white, small. Tentatively identified as *B. dichotoma* by L. Goldsmith. [1985: SF M-J10 82; 1989: SF 153-154] (1990: 12 = *B. dichotoma*) {Photo 1991: 57}

U164: Aguson, Philippines. Imported by Martin Johnson, 1984. Shrub-like. Leaf blades green, small, acuminate. Stems repent. Flowers pink. Johnson reports that winter protection is necessary.

U165: Queson, Philippines. Seed imported by Martin Johnson, 1984. Rhizomatous. Leaf blades green. Mabel Corwin reported that some plants were glabrous, some were sparsely hairy, otherwise they were identical.

U166: Queson, Philippines. Seed imported by M. Johnson from Sablong, 1984. Labeled "Red Begonia" by collector. (1987: 65, photo 66; 1990: 142.) Rhizomatous. Leaf blades medium green, peltate, finely marginated red, serrulate, cupped, 2-5 x 2-3 1/2 inches, 7-9 nerved, glabrous above, below distinct red hairs up to 1/4 inch widely spaced along nerves. Stipules flesh colored, red nerved, setaceous apex. Petioles green, succulent, sparsely spaced red hairs on upper area; a sparsely red-haired cuff encircles petiole at summit. Staminate flowers pink, 4 tepaled, (two narrow), 1 inch wide, glabrous. Pistillate flowers pink, 4-5 tepals of unequal size, glabrous. Note: M. Corwin and T. O'Reilly reported that seed planting produced a few seedlings with leaf blades dark green, flushed red above and burgundy below. (1987: 65, photo, 66; 1990: 142 = Tentatively *B. hermandioides*, ident. by Kingsley Langenberg) {Listed by Thelma O'Reilly as being *B. hermandioides*. 2006: 36}

U167: La Mesa Panama. Seed collected by R. Brin near the town of El Valle, 1985. Elevation 1050 m. (1985: 112; 1989: 68-89) Trailing/scandent. Stems green flushed red, succulent, glabrous, rooting at nodes. Leaf blades green, glabrous, ovate, 5 nerved, 2" x 3", marginally serrulate, sparsely ciliate. Petioles green flushed red, 1". Stipules green, quickly drying, persistent, glabrous, keeled, 1/2". Flowers pink, sometimes white flushed pink. Brin described plant in habitat as epiphytic with deep-red petioles, pink-red flowers and a wax-like appearance on leaves. Identified as a variety of *B. glabra* by T. O'Reilly. [1985: SF S-O11 112; 1989: SF 68-69] (1990: 142 = *B. glabra*, ident. by TOR) {Photo 1991, p. 56}

U168: Polillo, Philippines. Imported by M. Johnson, 1985. Shrub-like. Stems slender, slightly swollen at nodes, green turning corky with age. Leaf blades olive green flushed bronze with silvery spattered areas and sparsely scattered hairs above, glabrous and red below, ovate, acute, obliquely cordate, palmately 5 nerved, 2 1/2" - 3" x 1 3/4", marginally serrate, ciliate. Petioles pale red, glabrous, 3/4". Stipules green, setiferous, keeled, quickly drying, persistent, 1/2" - 3/4". No record of *B. U168* flowering in cultivation. Widely distributed by cuttings. Needs protection from cold and overwatering during winter months when it usually goes semi-dormant. <Shrub - NHG> {This begonia sports a very different, large, plain green leaved plant. Don Miller exhibited very large plant of U168 at a SWR Get-Together in 2000 having the sport growing on the plant; he also had a plant of the sport growing separately.} {Mention by Doug Pridgen as growing well in Miami. 2005:69}

U169: Mexico. Rhizomes collected in the State of Veracruz, 100 miles inland from ocean by Steve Correale, Miami, FL, 1985. Elevation 1500-3000 ft. Begonias were found mulched between large boulders in shady, damp area. Collected material was given to Charles Jaros. Rhizomatous. Rhizomes brown 1 1/2 - 2". Leaf blades green with bronze shading over upper surface mature into dark green with red under surface, nerves radiate from white spot, where leaf and petiole join. Petioles green, setaceous, collar of sparse trichomes at summit. Stipules green with bristly hairs, persistent.

U170: Casabita, Dominican Republic. Seed collected by Dr. Juan Rivera. Elevation 1000 m. Seed imported by M. Johnson. Shrub-like. Stems brownish-green, brittle, woody, lenticellate, glabrous, slightly swollen at nodes, 2' - 2 1/2'. Leaf blades deep green, glabrous, widely puckered, red depressed nerves above, red prominent nerves with tawny, fine hairs below, elongated ovate, obliquely cordate to deeply cordate, acuminate, crisp substance, 4" - 5" x 2", marginally dentate, denticulate, undulate. Petioles reddish green with soft, wooly, tawny hairs, channeled, 1". Stipules green, keeled, persistent, 1/2". Inflorescences consist of many full clusters of tiny, beautiful flowers. Staminate flower buds rose-red opening into 4 white-flushed-pink tepals, two outer tepals nerved red vertically, 6-9 stamens are pale yellow, each edged in dark red, creating a star-like cluster. Pistillate flowers are 5-6 tepalled, white flushed red with 1 large rose-red wing, 2 smaller wings are white-flushed rose-red. Peduncles wine red, 6 1/2 - 8". Pedicels rose-red, 1/2". An interesting characteristic is the blooming habit of this species. The peduncles emerge from the top of the stems, giving the plant a lovely, open, airy canopy. Another attractive feature is its potently sweet fragrance which is always evident. Tentatively identified as *B. domingensis* by T. O'Reilly. Verified by Dr. Lyman B. Smith. There are several forms of this species in the Smithsonian Herbarium. (1990: 142 = *B. domingensis*)

U171: Mexico. Seed collected by Frank Haussman, Homestead, FL. about 25 miles from Fortin, Mexico. Seed and seedlings distributed by M. Johnson. Identified as *B. manicata* by T. O'Reilly, 1985. (1990: = *B. manicata*)

U172: Trinidad. Seed collected by T. McLellan and J. Endler, 1985. (1985: 110 photo, 1985: 112, 1989: 68-69) Rhizomatous. Rhizomes often procumbent when young, but upright or semi-upright with age. Leaf blades lobed, ovate, cordate, bright green, glabrous above, green with sparse brown felting below. 4"-5", marginally variable. Flowers white, large, dichotomously branched. Peduncles tall, erect. White bracts cover developing inflorescences. McLellan remarks, "We call this begonia "Foundation" for its habit of growing on cement foundations and walls." Identified as *B. sericoneura* by T. McLellan. [1985: SF S-O4 112, 1989: SF 68-69] (1990: 142 = *B. sericoneura*) [2002 J-F SF JF02-U#172; 2003 SF 36]

U173: Costa Rica. Seed collected by T. McLellan and J. Endler, 1985. Rhizomatous. Collectors reported that this begonia appeared to be identical to B. U172 except for a red sinus on leaf blade. Identified as *B. sericoneura* by T. McLellan. (1990: 142 = *B. sericoneura*)

U174: Trinidad. Found in a potted orchid plant. Imported by T. McLellan and J. Engler, 1985. (1985: 112, 1989: 153-154.) Rhizomatous. Rhizome creeping, 1" - 1 1/2" with adventitious growths. Leaf blades parted, glabrous, medium green with 1/2" - 1" black margins. Flowers pink, numerous, small, dichotomously branched. Many growers have reported that this begonia is difficult to grow, tending to go dormant and not recover. Several have reported that B. U174 is different from *B. heracleifolia* as reported in the July-August *Begonian*. Further research is underway. [1985: SF S-O5 112; 1989: SF 153-154] (1990: 142 = *B. heracleifolia*)

U175: Trinidad. Collected in thin, green moss on wet rocks along the Marianne River by T. McLellan and J. Engler, 1985. (1988: 30). Shrub-like. Stems green, short, closely noded, glabrous with occasional hairs. Leaf blades green, covered with short, red semi-stiff hairs that are red as new leaves emerge from the stipules and gradually turn white above and white to pink below, ovate to lanceolate, acuminate, basally broadly to narrowly rounded, 2" -4" x 1 1/2" - 1 3/4", marginally serrate, serrulate, white to red scattered semi-stiff hairs, 2"-5". Stipules green, glabrous, 1/4" x 1/8", keeled with semi-stiff hairs, acuminate, persistent. Peduncles green flushed red or pinkish red, white semi-bristly hairs, 6" - 12", erect. Interestingly, peduncles usually have 1 - 2 nodes below flowers which sometimes bear small leaves typical of mature leaves. Bracts white with hairs. Bracteoles small, but prominent, fugacious (short-lived). Staminate flowers white to greenish-white, 1/2" x 3/4", 4 tepals echinate (provided with prickly hairs) on outer sides of 2 largest tepals. Pistillate flowers white to greenish-white, 5 tepals with echinate hairs on outer sides, 1 large, 2 smaller wings, each echinate. McLellan has searched for this begonia in herbariums of institutions and botanical gardens, including Europe. She has found no specimen to match *B. U175*. It may be a new species. (1985: 111) [1988: J-F 30] {TOR: B. U175 = *B. mariannensis* D.C.Wasshausen and T. McClellan 1995, 1995: 117}

U176: Bolivia. Plant material collected and deposited with the Marie Selby Botanical Gardens, Sarasota, FL. Cane-like. Stems are tall. Leaf blades dark green with silver splashes, large. This species appears to be related to *B. platanifolia*. <shrub - NHG> {Jack Golding considers = *B. wollnyi*, 1999: 48} [2002 J-F SF JF02-U#176; 2003 SF 36]

U177: Colombia. Collected 3 km. east of Bitaco, Dept. Valle, by Nat de Leon, Miami FL, 1959. Cane-like. Stems green turning corky with age, glabrous, slender, lenticellate, 2' x 4'. Leaf blades are green with bronze highlights and satiny sheen, sparsely strigillose above, red, glabrous below, lobed, ovate, asymmetrical, deeply cordate, 6" -12", marginally serrate, serrulate. Shortly ciliate. Petioles green flushed red, glabrous, channeled, 2 1/2". Stipules green x 1/4". Peduncles green flushed red, glabrous, 1 1/2". Pedicels pale pink, 1/2" - 3/4", glabrous. Bracts deciduous. Staminate flowers pink, sometimes white flushed pink, 2 tepals, orbicular, glabrous. Pistillate flowers pink, occasionally white flushed pink, glabrous, large, 3-5 tepals variable with largest 1" x 3/4", stigmas large, bicornute, wings pink with one smaller, glabrous, orbiculate. Efforts to self-pollinate this beautiful species have been unsuccessful to date. {Photo cover 1991}.

U178: Guatemala. Live plant material collected by Scott Hoover along road from Goding to Cocales, Salola, 1979. Elevation 3,600 ft. (1990: 142.) Rhizomatous. Rhizomes erect, often branched, succulent, internodes short, shaggy hairs on new growth, setaceous (bristly) trichomes on mature growth. Leaf blades dark green, usually a red spot on upper surfaces at petiole-blade junction, barely to deeply cordate, deeply palmately lobed, upper surfaces nearly glabrous, under sparsely pilose. Petioles 8-12 inches, sparsely tomentose-lanate (dense wooly covering of short hairs) with trichomes. Stipules subpersistent, keeled, terminating in a long bristle. Peduncles tomentose-lanate. Bracts ciliate-serrulate, sparsely pilose and glandular. Staminate flowers white to pale pink, glabrous, frequently glandular, two tepals. Pistillate flowers, white to pale pink; bracteoles subpersistent, obovate, marginally serrulate-denticulate, glabrous, glandular, two tepals, stigma lunate, three unequal wings. Flowering late December-April according to location. Identified as *Begonia crassicaulis* Lindley by Thelma O'Reilly. Verified by Dr. Lyman B. Smith. Note: For additional information see "Begonia crassicaulis - Fantasy or Fact" by T. O'Reilly *Begonian* 1985: 4-7. (1990: 142)

U179: Guatemala. Live plant material collected out of Cobun alta Vera Pax by Scot Hoover, 1979. Elevation 4,100 feet (1988: SF S-016 173, 1990: 142.) Rhizomatous. Rhizome quickly becoming erect, occasionally squamose at nodes, lenticellate. Leaf blades 5-7 inches, green, occasionally red-flushed, cordate, marginally ciliate and sparingly undulate, shallowly lobed, glabrous above, glabrous in intercostal regions below with prominent broad, lacerate scales, of brilliant red tipped with white bristles on the principal nerves. Petioles 4-6 inches green, closely spaced large, thick, concentric rings of white-tipped red lacerate scales prominently mark the upper sections of petioles with trichomes scattered over the lower section. Stipules 1 inch, strongly keeled, marginally entire, persistent, inflorescences 10-15 inches, asymmetric, many flowered. Staminate flowers white to light pink, glabrous, tepals two. Pistillate flowers white to light pink, glabrous, tepals two. Stigmas lunate, wings three. Identified as *B. manicata* Brogniart by T. O'Reilly. Verified by L.B. Smith. Note: This is a superior form of *B. manicata*, different from other forms I have seen in collections. [198: SF S-016 173] (1990: 142 = *B. manicata*)

U180: Panama. Live plant material collected at Pinas Bay, near the Colombian border, by Steve Correale, Miami, FL, 1984. Information supplied by Charles Jaros, 1985. Leaf blades green above and below, shallowly lobed, cordate. Petioles pale green, lenticellate with short, bristly scattered hairs. Plants were observed growing epiphytically side by side in the bark of a tree approximately twenty-five feet above the ground. None were ground growing terrestrially.

U181: Panama. Live plant material collected at Pinas Bay near the Colombian border by S. Correale, Miami, FL, 1984. Information supplied by C. Jaros. Rhizomatous. Leaf blades green above with bronze highlights, narrow red border marginally, sparsely ciliate, red-flushed with light green veins beneath. Petioles glabrous, green flushed red. This begonia and *Begonia U180* were growing side by side in the tree fork. It is possible this one is a form of *B. U180*.

U182: Solomon Islands, Guadalcanal. Seed collected near the village of Tanvasa by a third generation Sicilian serving in the Peace Corps, 1984. Seed distributed by Martin Johnson, 1985.

U183: Philippines. Seed distributed by M. Johnson, 1986. Flowers white.

U184: Philippines. Seed distributed by M. Johnson, 1986. Flowers red.

U185: Philippines. Plant imported from Queson by M. Johnson. 1984. A ground creeper with white flowers (1986: SF M-A9 48, 1989: SF 68-69)

U186: Venezuela. Seed supplied to Seed Fund by Professor J. D. Doorenbos, 1985 with information that he received seed labeled "SH 1980." and it belongs to the section Ruizopavonia. (1986: SF M-A9 48; 1989: SF 68-69 112.) Plants have been reported as Shrub-like and Thick-stemmed. Leaf blades green, shiny, ovate, glabrous with a prominent red spot at leaf blade petiole junction. Several growers report that growth habit and appearance are similar to *B. U095* but the flowers are different. [1986 SF M-A9 48; 1989: SF 68-69, Possibly thick/stem white flwrs] (1989: 112, Previous entry is in error) {Error was that U095/186 were offered as same on 68-69, on 112 is corrected that they are not the same.}

U187: Venezuela. Seed collected by Scott Hoover in Pittier National Park, 1980. Tuberos. Stemless. Leaf blades green with red spot at blade-petiole juncture, 4 x 6 inches, broadly ovate, acute, finely pubescent, marginally dentate. Inflorescence emerges from top of tuber. Staminate flowers pink, five (rarely four) serrulate, ciliate, finely pubescent tepals. Pistillate flowers pink, five (rarely six) unequal broadly elliptic, ciliate-serrulate, finely pubescent tepals, three unequal wings with largest oblong and ascending. Tentatively identified by Thelma O'Reilly and Carrie Karegeannes as *Begonia quetamensis* Smith & Schubert. Verified by Dr. Lyman B. Smith with the following information; in *Phytologia* 54 (no. 7): 469 (Jan 1984), Lyman Smith and Dieter Wasshausen made *B. quetamensis* S & S = *B. novogranatae* A. DC 1864. Note: For additional information see "A Scott Hoover Collection - *Begonia U187* identified as *Begonia novogranatae*" by T. O'Reilly *Begonian* 1985: 73-76. (1985: 73, cover, 76; 1990: 142 = *B. novogranatae*)

U188: Alturas de Echarate, Peru. Seed supplied to Seed Fund by Professor J.D. Doorenbos, 1985. Original seed, distributed by Jack Golding, was collected by R. Chavez (no. 1701). Habitat Sub-tropical, humid forest, acid soil, Elevation 1450 m. (1986: 48-72; 1988: 173; 1989: 188-189.) Thick-stemmed. This species has the peculiar habit of producing a fine pubescence on all parts of the plant, with the exception of stipules and inner surfaces of tepals, that feels sticky (dry) to the touch. Stems green with red lenticels, pubescent. Leaf blades medium green, 4 x 6 inches, both surfaces pubescent. Stipules pale green, 3/4 inch, deciduous. Staminate flowers white, two (rarely three) tepals, forming a cluster at apices of peduncles. Peduncles green, 3 inches, pubescent. Pedicels white, 1/2 inch, pubescent. <Chavez 1701> [1986: SF M-A10 48] [1986: SF 72] [1988: SF 9-07 173] [1986: SF: 153-154; 1990: SF 154-155]

U189: Africa. Live plant material labeled J.D. 1575 received by Mildred Thompson from Prof. Doorenbos, 1985. Rhizomatous. Section Scutobegonia. Leaf blades medium green, peltate. Millie Thompson corresponded on 8/31/05 that while preparing an African slide program, she sent scans of U189 to Dr. deWile who showed them to Dr. Sosef and both agreed to this being *B. quadrialata* ssp. *quadrialata* var. *quadrialata* M. Sosef, collected in Africa.

U190: New Guinea. Live plant material labeled J.D. 1007 received by Mildred Thompson from Prof. Doorenbos. 1985. Shrub-like. Leaf blades reddish.

U191: Paete, Philippines. Seed collected by Carling, 1985. Imported by Martin Johnson. Shrub-like. Climber to 12m. Flowers white.

U192: Bicol, Philippines. Live plant purchased and imported by M. Johnson. Plant was given to Bob Haussler and Joan Coulat for propagation and distribution. Trailing-scandent. Stems 12-16 inches, reddish, lenticellate, glabrous. Leaf blades rose-pink with areas of yellow green splashes at main nerves on upper surfaces, glabrous, openly cordate, ovate, 3 x 3 1/2 inches with finely dentate, ciliate, rippled margins, undersurface glabrous with short, bristly red hairs. Leaf blades glimmer and glow with a sparkling, silvery sheen. Petioles red with sparsely scattered hairs. Stipules 1 1/4 x 1/2 inches, tan with red nerves, persistent. Staminate flowers white, sometimes flushed pink, 4 tepals, 3/4 x 3/4 inches. Pistillate flowers like staminate flowers, ovary green, wings pink. Peduncles pink, 8-9 inches. Greenhouse or terrarium conditions recommended. For additional information see "Martin's Mystery Begonia" by Thelma O'Reilly *Begonian* 1988 1-5-6. <known as "CHJ"> (1988: 1, cover; 5)

U193: Chirique Province, Panama. Seed collected by Roberto Brin from Lagunas Volcan, Baru area, 1986. Habitat: Clay banks around the lagoons of tropical rain forest. Elevation 4910'. Temperature range 50-60F. (1986: 70-71; 1989: 153-154; 1990: 154-155.) Rhizomatous. Leaf blades green, 8 x 5 inches, marginally serrate-ciliate with prominent "drip points." Flowers white. [1989: SF: 153-154; 1990: SF 154-155]

U194: Chiriqui Province, Panama. Seed collected by R. Brin from Lagunas Volcan, Baru area, 1986. Habitat: Clay banks around lagoons of tropical rainforest. Elevation 4910'. Temperature range 50-60F. (1986: 70-71; 1989: 68-69; 1990: 142). Rhizomatous. Leaf blades dark green, 7 x 4 inches, upper surfaces hirsute, lower surfaces glabrous with narrow scales on nerves, marginally ciliate-serrulate, cordate, asymmetrical. Petioles green flushed red, 3 inches, lenticellate. Stipules green flushed red, ovate, keeled. Staminate flowers white, with two tepals (sometimes three.) Tentatively identified as *B. urophylla* by T. O'Reilly. [1986: SF M-J19 70] (1986: 71 photo; 1989: 68-69; 1990: 142 = *B. urophylla*)

U195: Chirique Province, Panama. Seed collected by R. Brin from Delgados Cattle Farm, 1986. Habitat: Clay banks along tree-covered creek on the farm. Elevation 4910'. Temperature range 50-60F. (1986: 70; 1989: 68-69.) Rhizomatous. Leaf blades green, 7 x 6 inches, drip points marginally. Flowers white. [1986: SF M-J20 70] (1989: 68-69)

U196: Chirique Province, Panama. Seed collected by R. Brin from Delgados Cattle Farm, 1986. Habitat: Clay banks along tree-covered creek on the farm. Elevation 4910'. Temperature range 50-60F. (1986: 70; 1989: 68-69.) Rhizomatous. Leaf blades green, 6 x 5 inches, drip points marginally. Flowers white. [1986: SF M-J21 70; 1989 SF 68-69]

U197: Chirique Province, Panama. Seed collected by R. Brin from Cerro Punta, Baru Volcan area, 1986. Habitat: Begonia was covering a tree at the edge of a trail. Elevation 6200'. Temperature range 50-60F. Also collected at Rio Sereno (1986: 70-71, 1989: 68-69.) Trailing-scandent. Leaf blades green 5 x 2 1/2 inches, asymmetrical, penninerved. Flowers white. [1986: SF M-J22 70] (1986: 71 photo) [1989: SF 68-69]

U198: Chiriqui Province, Panama. Seed collected by R. Brin from Delgado Cattle Farm, 1986. Habitat: Clay banks along tree-covered creek. Elevations 4910.' Temperature range 50-60F. (1986: 70; 1989: 68-69.) Rhizomatous. Leaf blades green, 6 x 3 inches, marginally serrated. Flowers white. [1986: SF M-J23 70; 1989: SF 68-69]

U199: Chirique Province, Panama. Seed collected by R. Brin at Bambito, 1986. Habitat: Slopes of Baru Volcano near a small river in the tropical rain forest. Elevation 5250'. Temperature range 50-60F. Also collected at Delgado Cattle Farm in Volcan. (1986: 7-0-71; 1989: 68-69.) Shrub-like. Leaf blades green, 5 x 2 1/2 inches, penninerved, marginally serrulate. Flowers white. [1986: SF M-J24 70] (1986: 71, photo) [1989: SF 68-69]

U200: Chirique Province, Panama. Seed collected by R. Brin about five miles beyond Volcan, 1986. Elevation 3200'. Temperature range 60-80F. (1986: 70.) Rhizomatous. Leaf blades green 9 x 6 inches. Flowers white. [1986: SF M-J25 70]

U201: Chirique Province, Panama. Seed collected by Roberto Brin in the Baru Volcano area, 1986. Habitat: Rio Sereno in the tropical rain forest. Elevation 6000'. Temperature range 50-60F. (1986: 70; 1990: 153-155.) Rhizomatous. Leaf blades green, 6 x 4 inches, marginally serrated with three prominent "drip points." Flowers white. [1986: SF M-J26 70; 1990: 153-155]

U202: Chirique Province, Panama. Seed collected by Roberto Brin in the Baru Volcano area, 1986. Habitat: Rio Sereno in the tropical rain forest. Elevation 6000'. Temperature range 50-60F. (1986: 70; 1989: 68-69.) Rhizomatous. Leaf blades green, 7 x 5 inches, three prominent "drip points" marginally. Flowers white. [1986: SF M-J27 70; 1989: SF 68-69]

U203: Panama Province, Panama. Seed collected by Roberto Brin, 1986. Habitat: Cerro Azul along clay banks open to sun. Elevation 2800'. Temperature range 50-60F. (1986: 70; 1989: 68-69.) Rhizomatous. Leaf blades green, 3 x 2 inches, shallowly lobed. Flowers white. [1986: SF M-J26 70; 1989: SF 68-69]

U204: La Mesa, El Valle, Panama. Seed collected by Roberto Brin, 1986. Habitat: Tropical rain forest. Elevation 3000'. Temperature range 50-60F. (1986: 70; 1989: 68-69.) Trailing-scandent. Leaf blades green, 3 1/2 x 1 1/2 inches, subentire marginally. Flowers white. [1986: SF M-J29 70; 1989: SF 68-69]

U205: La Mesa, El Valle, Panama. Seed collected by Roberto Brin at Linanes Gardens, 1986. Elevation 2800'. Temperature range 60-80F. (1986: 70; 1989: 154.) Rhizomatous. Leaf blades large, lobed, green above, red under. Flowers pink. See photo *Begonian* 1992, p. 97. [1986: SF M-J30 70; 1989: SF 154]

U206: Gabon, Africa. Collected by Dr. J.J. Bos. Seed sent to Mildred Thompson by Professor J. D. Doorenbos, 1985. Trailing-scandent. Section *Tetraphila*. Epiphytic with leaf blades deep green, glossy, medium sized, pinnately nerved. Male and female flowers four tepaled, ovary fusiform, small flowers are salmon colored and bloom profusely. See leaf print, *Begonian* 1992, p. 97.

U207: Coclé Province, Panama. Seed collected by Scott Hoover past El Valle on road to La Mesa, 1986. Habitat: Dry embankment on steep, rocky face and in soil under forest patch. Elevation 680 m. Rhizomatous. Tentatively identified as *B. urophylla* aff.* {aff.: bearing an affinity to} by S. Hoover.

U208: Coclé Province, Panama. Seed collected by S. Hoover on the road from El Valle to La Mesa, 1986. Habitat: growing 6-7' in trees of a forest area. Also observed along roadsides and stream margins. Elevation 870 m. Trailing-scandent. Stems woody- vine-like. Tentatively identified as *B. estrellensis* by S. Hoover.

U209: Coclé Province, Panama. Seed collected by S. Hoover on a trail above El Cope, 1986. Habitat: Underbrush along trail edge and in shady stream embankments. Elevation 980 m. Shrub-like. Small leaved species to 1.5 m.

U210: Panama. Seed collected by S. Hoover on road to Alto Quiel from Boquette, 1986. Habitat: Partly exposed dry forested embankment. Elevation 1700 m. Rhizomatous. Tentatively identified as *B. quaternata* aff. by S. Hoover.

U211: Heredia State, Panama. Seed collected by S. Hoover along road to Cariblanco, 1986. Habitat: Spreading out over vegetation and climbing up into tree branches. Elevation 1730 m. Trailing scandent. Many-branched vine-like species to 7 m.

U212: Alajuela State, Costa Rica. Seed collected by S. Hoover, past Zarcero along road to Quesada, 1986. Habitat: Dry, vertical embankment below forest patch. Elevation 1800 m. Rhizomatous. Section *Gireoudia*.

U213: Alajuela State, Costa Rica. Seed collected by S. Hoover past Zarcero along road to Quesada, 1986. Habitat: Steep embankment below forest patch and in forest. Elevation 1800 m. Shrublike. Species to 1 m.

U214: Alajuela State, Costa Rica. Seed collected by S. Hoover past Zarcero along road to Quesada, 1986. Habitat: Edge of forest above dry streambed. Elevation 1400 m. Shrub-like. Height to 1 m. Tentatively identified as *B. cooperi* aff. by S. Hoover.

U215: Alajuela State, Costa Rica. Seed collected by S. Hoover several km. before Monteverde Cloud Forest Preserve, 1986. Habitat: Steep exposed embankment. Elevation 1500 m. Height to 30 cm. Tentatively identified as *B. corredorana* aff. by S. Hoover.

U216: Alajuela State, Costa Rica. Seed collected by S. Hoover in Monteverde Cloud Forest Preserve, 1986. Tentatively identified as *B. estrellensis* aff. by S. Hoover.

U217: Gabon, Africa. Cutting sent to M. Thompson by Prof. Doorenbos, 1985. Trailing-scandent. Section Tetraphila. Leaf blades green, under three inches. Tiny pink flowers with white edging bloom profusely. A compact grower. See photo and leaf print: *Begonian* 1992, p. 98. (Identified by J.J. DeWilde as *B. letestui* J.J. DeWilde (2002) ; correspondence from Millie Thompson on 8/23/05)

U218: Brazil. Frequently seen in S. CA collections. Reported to have been imported by a bromeliad collector. Also similar to a species distributed in the 1960's by Sylvia Leatherman (1988: SF M-49 58). Shrub-like. Stems green, rigid, covered with tan fuzzy hairs, shallowly grooved, swollen at the nodes, new branching growth red. Leaf blades 5 x 2 1/2 inches, hunter green above, burgundy red below, short, setaceous, white hairs scattered over both surfaces, 7-9 nerved, apically acuminate, marginally serrate, dentate and shortly ciliate. Petiole 1/2 inch, green pubescent. Stipules 1/2 inch, green keeled, persistent, setiferous. Staminate flowers white with four tepals, glabrous above, pilose below. Pistillate flowers with five tepals, glabrous above, pilose below. Ovary small with few scattered hairs over three wings. Capsule large. [1986: SF M-A9 58]{1994: 88}

U219: Indonesia. Seed sent to Joan Campbell by Jan Goodwin. Cane-like. Stems green, glabrous succulent. Leaf blades green, shiny, glabrous. Pistillate flowers white edged pink, three wings, one large. Capsule large bright green. This species is similar to *Begonia holttumii*. {Photo 1994: 88.}

U220: New Guinea. Seed collected by Robert Standley for Howard Siebold who shared seed with a few growers. Germination reported only by Thelma O'Reilly. Five seedlings grew slowly, reaching 1/2 inches. As soon as summer heat arrived all seedlings damped off. {1994: 89}

U221: Plant obtained by Rudolf Ziesenhenné from a grower in Porterville, CA. Distributed widely since 1980 as an unidentified Brazilian species labeled *Begonia* 'Porterville'. Also distributed by the late Bob Cole as SH 96. Patrick Worley's cultivar, *B.* 'Dale Kramer', is a near look-alike to *B. U221*, which has smaller and darker green leaves. Another significant difference is the bloom record. Flowers have never been reported on *B. U221* while *B.* 'Dale Kramer' puts forth a shower of small white flowers seasonally. {Photo 1994: 89} {2004: 68 listed as part of *Begonia* 'Normand'}

U222: Mount Madyaas, Tibiaco, Panay Island, Philippines. Seed distributed by Martin Johnson, 1987. Collector reported seed collection at 2117 m. and referred to plant as 'Big Petals'. Mabel Corwin and T. O'Reilly reported that this begonia is a form of *B. U166* (tentatively identified as *B. hernandioides*) with discolor leaves (green above. red below).

U223: Mount Madyaas, Tibiaco, Panay Island, Philippines. Seed distributed by M. Johnson, 1987. Collected at 2117 m. {1994: 90}

U224: Infanta, Luzon, Philippines. Seed distributed by M. Johnson, 1987. Collector reported that this begonia was an erect plant. {1994: 90}

U225: Ormac, Leyte Island, Philippines. Seed distributed by M. Johnson, 1987. Trailing-scandent. Stem vine-like, tan tinged pink, thin, rooting at nodes. Leaf blades small, 1 x 1 {inch?} at maturity, green, glabrous, shallowly lobed occasionally, 4 nerved, apically widely acute, marginally entire. Petioles 1/4 - 1/2 inches, tan tinged pink, glabrous. Stipules tan, 4 mm, glabrous. I received several reports that this species is the same as *B. U075*, which has been identified as *B. aequata*. It is similar in habit and size. M. Corwin and T. O'Reilly spent several hours comparing the two begonias and observed differences between the two plants and another M. Johnson import from the Philippines labeled *B. leucosticta*. The leaves are unlike and there are other characteristics that do not match. To date there are no bloom reports on *B. U 225*. P.J. Merrill mentions close allies in this group of Philippine species. See photo, 1994: 92. {1994: 90}

U226: Durango, Mexico, Tubers collected by Bashor at 7000 feet. Distributed by Phyllis Bates. Stem grass green, succulent, upright. Leaf blades grass green, covered with short, white hairs (entire plants profusely covered with same type of hairs), shaped like a butterfly wing, i.e. rather angular, marginally dentate. Staminate flowers deep pink with four tepals, two broad, two narrow. Pistillate flowers deep pink with four tepals, ovary light green. {1990: 90}

U227: Mexico. Tubers collected by Bashor. Distributed by P. Bates (1988: SF M-A10 58). Tuberos. Stem red, succulent, small in diameter, giving plant a lax habit. Leaf blades deep green above, light green below, nerves palmate, margins serrate, base truncate. Flowers rose, buds emerge on elongating peduncles from the flared, keeled, overlapping pink bracts. Staminate flowers with four fimbriated tepals. Pistillate flowers with five tepals, ovary green tinged pink with three wings, two rounded, one extended. [1988: SF M-A10 58] {1990: 90}

- U228:** Mexico. Tubers collected by Bashor. Distributed by P. Bates. Entire plant covered with fine white hairs. Tuberous. Stem red, succulent, upright. Leaf blades green, asymmetric, ovate, veins outlined in brown above, marginally serrate. {1990: 90}
- U229:** Iguazu Falls, Brazil. Seed collected by C.M. Fitch, 1987. Seed sent to Jack Golding. Tentatively identified as *B. subvillosa* by J. Golding.
- U230:** Western Malaysia. Seed of this species was one of several kinds collected by Mohamed Abraham, 1987. Seed was sent to Thelma O'Reilly who conducted "A Malaysian Project" with the participation of several ABs members (SF 1988: 58.) Identified as *B. Holtunii* by T. O'Reilly. Verified by L. B. Smith. Note for further information, description and photos see *Begonian*: 1988:45; 1990:45. <MZI-01> (1988: 45) [1988: SF M-A11 58] (1990: 142 = *B. holtunii*, ident. TOR, verified by L. B. Smith)
- U231:** This number was mistakenly assigned to *B. U162*.
- U232:** Sablang, Luzon, Philippines. Seed imported by Martin Johnson, February 1988.
- U233:** El Triunfo, Mexico. Seed supplied by Martin Johnson. Collected in forest a few km above Finca Prussia, 1988. Rhizomatous. Leaves large, green, stem rather thick with scattered trichomes, inflorescence tall with white flushed pink flowers. Tentatively identified as form of *B. manicata* by T. O'Reilly.
- U234:** Philippines. Seed imported by M. Johnson, 1988. Vining type with green leaves.
- U235:** Bolivar Province, Ecuador. Seed collected by Scott Hoover 14.4 km. from crest of divide on road from Guarunda to Pueblo Viejo, 1988. Habitat: Stream margin heavily shaded by bamboo. Elevation 7100 ft. Shrub-like.
- U236:** Ecuador. Seed collected by S. Hoover along road 15.8 km. from Bucay, Guayas to Riobamba, Chimborazo, 1988. Habitat: Recent landslide area above road, large boulders and earth mixed together on exposed area. Elevation 4000 ft. (SF 1988: 173; 1990: 155; 1991: 112.) Tuberous. Cane-like habit. [1988: SF S-01 173; 1990: 154-155]
- U237:** Ecuador. Seed collected by S. Hoover along road from Machala to Loja, 1988. Habitat. Abundant population on small exposed south-facing rock cliff surface about 5 km out of Pinas. Elevation 3900 ft. Also observed in small colonies up to 8000 ft. Tuberous. Acaulescent, flowers pink or white and few (white, occasionally flushed pink in cultivation.) (SF 1990: 155.) Note: See *Begonian* (ND 1995: 207) for description, photos and research information about *B. U237*. [1990: 154-155] {SF 1997 20: Tuber can get quite large. Upon breaking dormancy in summer, the fragrant flowers usually appear first, followed by the leaves.}[2002 J-F 27 JF02-06 Tuberous] [2002: 68 SF new seed]
- U238:** Chimborazo, Ecuador. Seed collected by S. Hoover along road from Loja to Cuenca, 1988. Habitat: Scattered sporadically along rocky cliff embankments, uncommon, scarce. Elevation 7000 ft. Tuberous. Acaulescent, flowers white and pink, heavy white pubescence on lower surface only.
- U239:** Chimborazo, Ecuador. Seed collected by WSH along road from Cuenca, Azusy to Mendez, Morana, Santiago, 1988. Habitat: Stream margin area, in deep shade under shrubs and bamboo several meters above stream. Elevation 8800 ft. Shrublike. Identified as *B. urticae* by S. Hoover. (1990: 142 = *B. urticae*)
- U240:** Chimborazo, Ecuador. Seed collected by S. Hoover 40.4 km from crest, 1988. Habitat: Steep, relatively dry embankment above road. Elevation 5600 ft. Well established population of plants 10-12 ft. high. Shrub-like. Identified by S. Hoover as *B. parviflora*. (1990: 142 = *B. parviflora*)
- U241:** Canar Province, Ecuador. Herbaceous. Seed collected by Scott Hoover on steep, wet embankment near a small waterfall in deep shade, 1988. Also observed occurring epiphytically. Elevation 2100 ft. Leaf blades green, glabrous, oblanceolate and basally cuneate. Flowers white (SF 1988: 173.) Identified as *Begonia maynensis* by S. Hoover. [1988: SF S-O4 173; 1990: 13-155]
- U242:** Canar Province, Ecuador. Ruizovania. Seed collected by S. Hoover in partially cleared forest area above streams along new road to Morono, 1988. Elevation 2300 ft. Identified as *B. rossmanniae* by S. Hoover. (1990: 142 = *B. rossmanniae*) {Photo of flowers 1996: 105}
- U243:** Tungurahua Province, Ecuador. Seed collected by S. Hoover on steep embankment above road 32.5 km. from Banos, 1988. Abundant population in area heavily vegetated with orchids, ferns, gesneriads and shrubs. Elevation 4100 ft.

U244: Tungurahua Province, Ecuador. Herbaceous. Seed collected by S. Hoover on heavily shaded, wet cliff adjacent to waterfall in dense forest area 37.6 km. along road from Puyo to Tena, 1988. Elevation 3100 ft. Likely related to *B. maynensis* reported by S. Hoover.

U245: Pastazu Province, Ecuador. Seed collected by S. Hoover along stream margin area in heavily shaded forest 83.6 km. from Puya, 1988. Begonias growing on embankment above stream. One small patch of several individuals had variegated leaf blades with silver spots between veins. Elevation 2000 ft. (SF 1988: 173; 1990: 109-110). Identified as *B. maynensis* by S. Hoover. Note: The following information was shared by Mabel Corwin, Joan Cambell and Thelma O'Reilly: Majority of plants had green leaf blades with silvery white areas overall on upper surfaces with green to red under surfaces. Leaf blades on a few plants had solid green surfaces overall. Flowers were variable. In my opinion *B. U245* is closely related to *B. longimaculata* Irmscher and further study should be made of the relationship between these two species. [1988: SF S-O4 173; 1990: SF 109-110] (1990: 142, = *B. maynensis*)

U246: Pastazu Province, Ecuador. Seed collected by S. Hoover on heavily vegetated, steep embankment near road several km past Covanga, 1988. Elevation 5500 ft. (SF 1988: 173.) [1988: SF S-O3 173 Section Ruizopavonia; 1990: SF 69-70]

U247: Pichincha Province, Ecuador. Seed collected by S. Hoover on dry cliff above road and stream 56.8 km. from Quito. Elevation 6900 ft. (SF 1988: 173; 1990 69-70.) Identified as *B. maurandiae* by S. Hoover. (1990: 142, = Tentatively *B. maurandiae*)

U248: Pichincha Province, Ecuador. Seed collected by S. Hoover along small streamlet 5.6 km. from La Palma, 1988. Flowers located at leaf axils. Elevation 4000 ft.

U249: El Valle, Panama. Seed collected by Robert Brin, 1988 by a stone wall exposed to full sun. Elevation 2600 ft. (SF 1989:114) Shrub-like. Leaf blades pale green, asymmetrical, pubescent. Flowers pink identified as *Begonia filipes* by Thelma O'Reilly. [1989: SF 114, Panama, RB collector, RB401, white flowers] (1990: 142, *B. filipes*, ident. TQR.) <RB401> [1989: SF 114] (1990: 142, = *B. filipes*)

U250: El Valle, Panama. Seed collected by R. Brin, 1988 in a private garden within an area exposed to the sun. Elevation 2600 ft. (SF 1989:114; 1992: 36.) Shrub-like. Stems 4 ft. Leaf blades pale green, succulent, 4 x 5 in. Flowers white, blooming year round. [1989: SF 114, Panama, RB collector, RB401, white flwrs]. Private garden @ 2600 ft., pale green, succulent, leaves 4 x 5", will grow to 4'. Shrub - stems 4', leaf blades green. [1989: SF 114] {Photo 7/8 1990 *Begonian* p. 143.}

U251: Nueva Vizcaya, Luzon, Philippines. Plant material collected by J. Atwood at Dalton Pass, 1987. Distributed by Marie Selby Botanical Gardens. Habitat: Dry cliff face. Surrounding vegetation included xerophytic fern, Pityrogramma. Elevation 1200 m. Rhizomatous. Rhizome repent, slender, internodes short. Leaf blades oblique, bullate, 3-4 x 2-2 1/2 in., shallowly cordate, apically acuminate, marginally entire to barely dentate, ciliolate, dark green with grass green bordered nerves and bristly, reddish pubescence above, dark red with raised green nerves and red pubescence beneath. Petioles 6-12 in., green with woody, reddish pubescence scattered over entire length. Stipules 1/4 - 1/2 in., tan, persistent above glabrous, sparsely scattered pubescence beneath, keeled. Flowers white. Staminate tepals 4. Note: this beautiful leaved species is difficult to cultivate. It requires a greenhouse or terrarium conditions. Mabel Corwin and I {TOR} have been unable to bring it into flower. It has periods of dormancy, often succumbing during this state. {TOR: = *B. chloroneura* P. Wilkie and M. Sands 1999.)

U252: Dominica, West Indies. Seed collected by Lynda Goldsmith during a visit to this small mountainous island. Shrub-like. Stem erect, 2-3 ft. high, branched, green flushed tan, pubescent, turning woody with age. Leaf blades ovate, cordate, medium green, glabrous, nitidous throughout above, pale green, glabrous with pubescence on raised nerves beneath, apically acuminate, marginally dentate, serrulate. Petioles green suffused red to red, 3-4 in., glabrous, setiferous, keeled. Inflorescences rise above the plant. If greenhouse grown inflorescences are green with white flowers, if cultivated outdoors they are red with white and red flowers. Peduncles 5-9 in., glabrous. Pedicels 1/2 in., glabrous. Staminate flowers: small, star-like shaped, glabrous, 4 tepals, 2 red and 2 white or completely red or white on same inflorescence. Distillate flowers: small, star-like shaped, glabrous, 5 tepals, usually white with red stripes on lower surfaces or completely red. All flowers are strongly scented. Note: Lynda Goldsmith and I discussed the possibility that *B. U252* = *B. oblique*. Complete information about *B. oblique* is available in Jack Golding's publication *Begonia nomenclature notes*. The Lectotypification of *Begonia oblique* Linnaeus, published in *Phytologia*, Vol. 45, March 1980, No. 3. (SF 1997 Beg. p. 146) [1990: SF 68-70][2002: 27 SF JF02-07] [2002: 68 SF new seed; 2003 SF 36]

- U253:** Chiapas, Mexico. Seed collected by Margie Harris at Ruinas Bonampak. Habitat: Population growing at the base of right-most temple on top of pyramid. (SF 1989: 235-6.) Identified as *B. sericoneura* by T. O'Reilly. Note: For additional information read *Begonian* 1989, p. 224. (1989: 224) [1989: SF 35-236]
- U254:** Brazil. This temporary Unidentified Species Number was assigned to a plant collected by Mulford B. Foster in 1946 and identified as *B. acetosa* Vellozo by Dr. Lyman B. Smith. A question to J. Golding from T. O'Reilly about the possibility that *B. acetosa* Vellozo and *B. itaguassuensis* Brade might be the same species started an extensive investigation by J. Golding in 1989. For comprehensive reports on his research and final determination that *B. U254* is *B. acetosa* Vellozo, read J. Golding's interesting articles in the *Begonian* 1989:: 228-232; 1996: 49-51. (1989: 230-232) [1990: SF 189]
- U255:** Chimborazo Ecuador. Tubers collected by Scott Hoover 15.8 km. from Bucay, 1988. Habitat: Fairly recent landslide area above road with large boulders and earth mixed together, very exposed. Elevation - 4000 ft. Tuberos. Growth cane-like, flowers orange (SF 1989: 235-236.) [1989: SF 235-236]
- U256:** Tepoztlan, Mexico. Seed collected in wild area. Stems single. Leaf blades green with some red when exposed to sun. Flowers profuse. [1989: SF 235-236]
- U257:** El Valle, Panama. Seed collected in a private garden by Roberto Brin, 1990. (*Begonian*, SF 1990: 68-70) Semperflorens. Leaf blades green, round. Flowers deep pink. (1990: SF 68-70, Panama, RB collector, semp. Leaf blades green, round. Flowers deep pink) [1989: SF 68-70; 2005: 195 SF]
- U258:** Mexico. Seed imported to Seed Fund Director, 1990. Rhizomatous. Leaf blades green. Identified as *B. manicata* by Thelma O'Reilly.(1990: SF 109-110) [1990: SF 109-110]
- U259:** Morona, Santiago Province, Ecuador. Seed and plant material collected by Don Miller on a road from Mendez to Morona, July 1989. Habitat: Growing in rocks on a vertical cliff in a sunny location. *B. parviflora* and *B. glabra* grow nearby. Elevation 3000 ft.. Shrub-like. Mature stem 30 cm. Leaf blades green, cordate, 3 cm. x 3 cm., glabrous with 6 nerves. Petioles red in sun, green in shade, glabrous. Flowers white, few with 4 male tepals. (1992: 94. Ecuador - Don Miller, Shrub-like to 30 cm.)
- U260:** Morona, Santiago Province, Ecuador. Plant material collected by Don Miller on a new road from Mendez to Morona, July 1989. Habitat: Growing in grass covered soil on side of road in full sun. Elevation 2000 ft. Shrub-like. Leaf blades bare, green, elliptic with acuminate apices, basally oblique, marginally serrulate. Flowers many, white with 4 male tepals. Collector noted resemblance to *B. foliosa*, but flowers larger. (1992: 94: Ecuador - Don Miller - like *B. foliosa*)
- U261:** Morona, Santiago Province, Ecuador. Plant material collected by Padre Angel M. Andretta, 1988-89. For the complete story and description of this remarkably beautiful begonia species discovered by well-known Ecuadorian collector and guide, Padre Andretta, read "A Black Beauty from the Dark Jungles of Ecuador" by Don Miller in the *Begonian*, 1991: 3, 1
- U262:** Peru. No information available on this seed. [1990: SF 109-110, Shrub]
- U263:** Chiapas, Mexico. Seed collected by Steven Wells, 1990. The Seed Fund habitat information is incorrect. Listed information applies to B. U253. Read article in the November/December *Begonian* 1989, pp. 224-225. (1990: SF 109-110, Mexico - Steve Wells; 1989 Beg., p. 224-225.) [1990: SF 109-110]
- U264:** Northern Thailand. Seed collected by Scott Hoover at Huai Sai Lieng waterfall at Doi Inthanon National Park in Chiang Mai Province, 1990. Habitat: SW slope above main falls under large rock outcrop.
- U265:** Northern Thailand. Seed collected by Scott Hoover in Doi Inthanon National Park. Chiang Mai Province, 1990. Habitat: Shady, dry embankment in forested area 100 m. along trail from parking area to Mi Pan waterfall. Elevation 4000 ft. Rhizomatous. Collector notes that this species resembles rhizomatous type from Neotropics with habit lacking secondary branching above the ground. Few flowered inflorescences. (1990: 189-190, Thailand, WSH collector. Green leaves, white flowers, elev. 4000', shady, dry - rhizome) [1990: 189-190]
- U266:** [1990: 190] 2003: 187 Northern Thailand. Seed and cuttings collected by Scott Hoover along road in Doi Inthanon National Park, January, 1990. Habitat: Dry embankment in heavily forested area with large trees. Small population of about 12 plants of a very beautiful species. Elevation 5500 ft. Collector noted that this species has an affinity to *Begonia cathcartii*.

U267: [1990: 189-190, Thailand, WSH collector] 2003: 187 Northern Thailand. Seed collected by Scott Hoover along road to Reforestation Substation in Doi Inthanon National Park, January 1990. Habitat: Stream margin and forest area above stream with individuals scattered along sloping embankment. Elevation 5400 ft. Collector noted affinity to *B. cathcartii*.

U268: [1990: 189-190, Thailand, WSH collector] 2003: 187 Northern Thailand. Seed and cuttings collected by S. Hoover near top of mountain along road to Ma Hidon waterfall, January 1990. Rhizomatous. Species has secondary branches. Habitat: Dampish north facing embankment covered in brush. Elevation: 5400 ft. Collector noted affinity to *B. siamensis* or *B. laciniata*. Photo on 188.

U269: [1990: 189-190, Thailand, WSH collector] 2003: 187 Northern Thailand. seed collected by S. Hoover at stream crossing road beyond B. U268 collection, January 1990. Habitat: Damp area, plants growing on boulder. elevation 4700 ft. Rhizomatous. Mature plants nearly one meter tall with large leaves to 20 cm. Pink male and female flowers. Photo on 188.

U270: 2003: 187 Western Malaysia. Seed and cuttings collected by S. Hoover 60 ks from RT2 on road to Genting Highlands, February 1990. habitat: Abundant population along small heavily shaded stream. Growing on rocks and soil. Elevation 3000 ft. Rhizomatous. About 20 cm. high, in fruit. Leaves triangularly shaped.

U271: 2003: 187 Western Malaysia. Seed and cuttings collected by S. Hoover on road to Genting Highlands, February, 1990. Habitat: Plants growing on rocks and soil above shaded stream. Elevation 3300 ft. Shrub-like. Beautiful species to 50 cm. with red venation on leaves. Collector noted affinity to *B. pseudisoptera*.

U272:

U273: {2003: 163, 200 watercolor by Joy Porter} 2003: 187 Western Malaysia. Seed and cuttings collected by S. Hoover along Hwy. 59 to Cameron Highlands. February 1990. Habitat: Growing among boulders in very dry area. Elevation 2000 ft. Shrub-like. Epiphytic at base of tree growing among boulders as an individual or an aggregate of several plants all massed together with interconnected roots.

U274: 2003: 187 Western Malaysia. Seed and cuttings collected by S. Hoover on Hwy. 59 to Cameron Highlands at small waterfall near road, February 1990. Habitat: On cliff face with small stream of water running down face, elevation 2000 ft. Rhizomatous. Vinelike growing in moist soil. Leaves to 10 cm. Flowers pink. Tentatively identified as *B. pavonina* by collector.

U275: 2003: 189 Western Malaysia. Cuttings collected by S. Hoover along stream embankment on RT 59 to Ringlet, Cameron Highlands. Pahang Province, February 1990. Habitat: Growing along embankment above side road along heavily shaded stream under banana trees and other vegetation. Elevation 4500 ft. Rhizomatous. Beautiful vine-like creeping species, some with bronze leaves often having yellow veins, some with green pustulated leaves. Collector noted affinity to *B. decora*.

U276: Western Malaysia. Cuttings collected by Scott Hoover on Road to Ringlet, Cameroun Highlands, February, 1990. Habitat: Embankment of stream along road. Several individuals, tallest to 3.25 m with leaves to nearly 18 cm (10"). Elevation 4200 ft. Collector noted that this species has an affinity to *Begonia tricornis*. *Begonian* 2004: 32-35, photo 32.

U277: Western Malaysia. Seed and cuttings collected by Scott Hoover along Hwy. 959 along road to Ringlet, Cameroun Highlands, February 1990. Habitat: A dry waterfall cliff face. Elevation 3600 ft. Rhizomatous. Vine-like, showing characteristics of two species. One possibly *Begonia decora*. Leaves have slight bumps where trichomes appear and veins are raised on upper surface. Great variation on certain individuals. *Begonian* 2004: 32-35.

U278: Western Malaysia. Seed and cuttings collected by Scott Hoover along Hwy. 959 along road to Ringlet, Cameroun Highlands, February 1990. Habitat: Modest population with strongly iridescent, blue colored leaves scattered along side of trail. Elevation 3500 ft. Collector noted that this species could be the same as B. U274 or possibly *Begonia pavonina*. *Begonian* 2004: 32-35.

U279: Western Malaysia. Seed and cuttings collected by Scott Hoover 1.9 km from High. 59 along road to bottom of Robinson Falls, February 1990. Habitat: Embankment above river, just below dam. Large population distributed along both sides of river. Elevation: 3700 ft. rhizomatous. Leaves variable in color, some bronze, some iridescent blue. Collector noted this collection could be same as *B. U278*. *Begonian* 2004: 32-35.

U280: [1990: 189-190, Thailand, WSH collector] Western Malaysia. Seed and cuttings collected by Scott Hoover on road to Banong Brinkhang, February 1990. Habitat: along embankment above dry stream bed with moss covered boulders in stream. Also observed growing on forest floor and epiphytically. Elevation: 5700 ft. Rhizomatous: Species with secondary branching. Flowers white flushed pink, 2" across. Begonian 2004: 32-35.

U281: Western Malaysia. Seed and cuttings collected by Scott Hoover at same location elevation and date as *U280*. Collected noted that seed of this collection possibly is a hybrid between this collection and *Begonia decora*. Begonian 2004: 32-35.

U282: Western Malaysia. cuttings collected by Scott Hoover along Rt. 4 to Kota Bahru, Perak Province. Habitat: Along stream embankment above and past waterfall. Two individuals observed and collected, one in soil above stream, one on mossy rock. Elevation 2500 ft. Collector noted affinity to *Begonia pseudisoptera*. Begonian 2004: 32-35.

U283: Western Malaysia. Seed and cuttings collected by Scott Hoover off logging road 25.0 km. from Temeggor Reservoir, Perak Province about 5 km along logging road, February, 1990. Elevation 3000 ft. Collector has identified this collection as *Begonia pseudisoptera*. Begonian 2004: 32-35.

U284: [1990: 189-190, Thailand, WSH collector] Western Malaysia. Cuttings collected by Scott Hoover 29.8 km past Temeggor Reservoir, February, 1990. Habitat. Modest population growing at base of small trees down steep embankment off logging road. Elevation 3400 ft. Rhizomatous: Secondary branching, large leaves up to 10-12 cm. Collector noted affinity to *Begonia maxwelliana*. Begonian 2004: 32-35.

U285: Northern Thailand. Cuttings collected by Scott Hoover at Huai Sai Lieng Waterfall, January 1990. Habitat: Plants mixed in grass along upper slope of S. side of waterfall, abundant population growing with salaginella. No flowers. Elevation 3900 ft. Begonian 2004: 32-35.

U286: [1990: 189-190] {1991: 232-233, Panama. Rhizome, pale green leaves, white flowers; 1996: 180, El Valle, Panama. White flowers in winter, pale green leaves.} Panama, El Valle. Seed collected Roberto Brin, 1990. Rhizomatous: Leaves pale green, flowers white, winter flowering. Begonian 2004: 32-35.

U287: {1991: 232-233. Rhizome. Panama. Has the same description as 286, but is thought to be different} Panama, El Valle. Seed collected by Roberto Brin, 1990. Rhizomatous: Leaves pale green, flowers white, winter flowering. Collected reported plant is different from *B. U286*. Begonian 2004: 32-35.

U288: Western Malaysia. Seed and cuttings collected by Scott Hoover 21.5 km from Rt. 2 on road through Genting Highlands, February 1990. Habitat: Plants growing along rocks and rotted logs in shade of banana and fern trees. Elevation: 4400 ft. Rhizomatous: Vine-like, similar to *B. U270*, but habit is different and leaves larger. Flowers pink. Begonian 2004: 32-35.

U289: Western Malaysia. Seed and cuttings collected by Scott Hoover below Hwy. at KM past 14 Doi Pui National Park, January 1990. Habitat: Very small population of several individuals growing on wet, heavily shaded cliff face with little soil. Elevation 3300 ft. Rhizomatous: Shows secondary branching. Collector questions affinity to *Begonia inflata*. Begonian 2004: 32-35.

U290: Northern Thailand. cuttings collected by Scott Hoover through Doi Chiang Doa Wildlife Sanctuary, January, 1990. Habitat: Stream margin 2 km from main office within 15 m of gat. Elevation 2000 ft. Rhizomatous: Secondary branching, leaves narrow with serrated margins. One individual observed nearly a meter tall, no fruit or seed. Begonian 2004: 32-35.

U291: Northern Thailand. Cuttings collected by Scott Hoover below Hwy. at KM post 14, Doi Suthep/Doi Pui National Park, January 1990. Habitat: Very small population composed of several individuals growing on wet, heavily shaded cliff face. Elevation 3300 ft. Rhizomatous. Species with secondary branching. Sympatric with *B. U289*. Begonian 2004: 32-35.

U292: Northern Thailand. Cuttings collected by Scott Hoover about 20 m. along trail to Drung Ching waterfall within 300 m. of original office headquarters for Khoa Luang National Park, February, 1990. Habitat: Isolated individuals, no colonies. Elevation: 350 ft. Herb: One individual observed in fruit that was wingless. The fruit of this species is characteristic of fruit on a single specimen of *Begonia garrettii* Craib found in herbarium. Thelma O'Riley notes: *B. U292* is the most distinct and captivating begonia species I have studied to date. I have been unable to make an identification due to the unusual inflorescence and fruit. After several trials and errors, Mabel Corwin succeeded in producing viable seed by removing the fruit before it dried completely (a few months), and allowed it to dry separated from inflorescence. In cultivation this species

appears to have a medium-sized rhizome. See photographs on p. 32 and 34. *Begonian* 2004: 32-35. {Listed by Thelma O'Reilly as being *B. obovoidea*. 2006: 36}

U293: Western Malaysia. cuttings collected by Scott Hoover 40.0 km. from Rt. 1 on road to Fraser Hill off Rt. 55, February 21, 1990. Habitat: A modest population on a moss covered Shady Cliff face above stream. Elevation 3100 ft. this rhizomatous species is same as B. U303. *Begonian* 2004: 46-47.

U294: Western Malaysia. cuttings collected by Scott Hoover at Maxwells Hill, Perak Province, March 1, 1990., Habitat: About 150 m. before office building above a small stream on a heavily vegetated embankment above a drain ditch. Elevation 3200 ft. Collector noted that this species has an affinity to *Begonia maxwelliana*. *Begonian* 2004: 46-47.

U295: Ecuador. Tubers collected by Scott Hoover on Los Rios Province on road from Guaranda to Pueblo Viejo, 34.8 km from a crest, January 21, 1988. Abundant local population along cliff face. Tuberos: Scarlet red flowers. Elevation 2900 ft. Note: In cultivation Thelma O'Reilly noted flower color was deep orange, leaves green, female tepals 5, male tepals 4. Identified as *Begonia froebelii* by Thelma O'Reilly. *Begonian* 2004: 46-47. Photo on 47.

U296: Northern Thailand. Cuttings collected by Scott Hoover at Doi Inthanon National Park, January 25, 1990. Habitat: Steep wet slopes at Si Ri Phum waterfall. Population growing in mist of waterfall. Elevation 5700 ft. *Begonian* 2004: 46-47.

U297: Northern Thailand. Cuttings collected by Scott Hoover at Thum Lucasi Cave in Doi Suthep/Doi Pui National Park, January 17, 1990. Habitat: Small population growing in cracks between limestone boulders in small waterfall. *Begonian* 2004: 46-47.

U298: Ecuador: Cuttings collected by Scott Hoover near Hwy. 63.2 km from Machala between Camaone and Saracay. February 25, 1988. habitat: Forested embankment on nearly vertical rock face. Elevation 1200 ft. Rhizomatous. Modest colony of scattered individuals with *Begonia nelumbifolia*-like roundish, peltate leaves. *Begonian* 2004: 46-47. Photo on 47.

U299: Laguna, the Philippines. Species seed obtained by Martin Johnson from University of Philippines Land Grant. Distributed by Edgar Bates, July 1991. *Begonian* 2004: 46-47.

U300: Hinabongan, N. Samar, Indonesia. Species seed obtained by Martin Johnson. Distributed by Edgar Bates, July 1991. Rhizomatous. Leaves greenish bronze, sparsely hairy with few stiff hairs on upper veins, 1 3/4" x 2 1/4". Male flowers white, small glabrous, 2 tepals, female flowers white, small glabrous, 4 tepals. Terrarium culture recommended. *Begonian* 2004: 46-47. **U301:** Telupit Malaysia. species obtained by Martin Johnson. distributed by Edgar Bates, July 1991. Habitat: Meliau River *Begonian* 2004: 46-47.

U302: Ecuador. Collected by **Scott Hoover**. Assigned to **Joy Porter** 12/15/92. No additional information available. *Begonian* 2004: 190-193

U303: {2001 March/April 43, Johanna Zinn describes the plant collected by Scott Hoover in Malaysia, cranberry Stem is 0.3 to 0.5 cm, oldr stems light green flushed with cranberry, first creeping, then rising. Stipules are persistent Flowers pink. Grown as a terrarium plant. Article has a drawing by Joy Porter.} Western Malaysia, Selanger Province. Cuttings collected by Scott Hoover on route 55 to Frazer Hill, February, 1990. Habitat: Embankment above stream. Elevation: 3500 ft. Rhizomatous: Triangular shaped leaf blades 5" x 1 1/2", green with bronze cast, dark red below with prominent nerves. Petiole channeled with white felt-like hairs. Flowers pink, 4 male tepals, 5-6 female tepals. Note: Cutting sent to **Don Miller**. He shared a cutting with Joy Porter. Her lovely painting of this species was featured in the *Begonian* Vol. 69, page 43. *Begonian* 2004: 190-193

U304: {2000 *Beg.*, p. 112 SF: No description.} {2003: 150, photo by Johanna Zinn as grown by Gene Salisbury in 2003 ABS Show. Charles Jaros provided seed in 2000 from plant first thought to be from Thailand, but coming there from Columbia with an orchid; Thelma O'Reilly however doubts its Columbian origin and believes it might be an Asian species.} {2004: 163, 165. Article Jackie Davis. Article on growing B. U304. Photo on 191.} Thailand. Plant introduced by **Eleanor Fischer Bender**, Florida, 1991. She obtained this distinctive species when visiting a botanical garden in Thailand and was informed that the plant was obtained while attending an orchid show in Columbia, S. America. Rhizomatous: leaf blades dark green with pristine white eye at petiole and leaf junction, upper surface scabrous, lower surface dark red, glabrous, 4" x 3". Margin ciliolate, crenulate. Petiole red with white scale-like hairs pointing in a downward position cover the petiole.

Note: Additional information about *Begonia U304* occurred when the Margaret Lee Branch members were testing seed for the CMK Seed Fund. Thelma O'Reilly noticed a green seedling among the darker ones in Inga Foo's container. She was advised to give it TLC. A year later we met at her home and saw a lime green plant in a large terrarium with a dark green plant. Inga shared a leaf with Thelma. A few months later the leaf had rooted and produced several new plants with lime green blades on both surfaces. Please advise Thelma O'Reilly if this occurred on your *B. U304*. This plant has also been distributed under the incorrect name of *B. 'Birdsey'*. Several grower's questions the habitat of this species, suggesting Brazil or Asian species. *Begonian* 2004: 190-193, photo 190} {Identified by Thelma O'Reilly as being in section *Pritzelia*. 2006: 36}

U305: Western Malaysia, Perak Province. Tubers collected by Scott Hoover and Don Miller along Route 4 to Kota Baharu, February, 1980. Habitat: Steep slope above Hwy. at base of small cliff. Elevation: 1500'. Tuberos: Leaf blades green with silver spots. Tentatively identified as *Begonia guttata* by collectors. Later identified as *Begonia variabilis* by Thelma O'Reilly and verified by **Jack Golding**. Note: *Begonia variabilis* is featured on the *Begonian* cover, Vol. 67. An excellent article, including a comprehensive description by **Johanna Zinn** appears on page 98 of that same issue. *Begonian* 2004: 190-193

U306: Papua, New Guinea. Seed sent to **Carrie Karegeannes** by **Jan Goodwin**, Australia, 1992. Testors reported germination followed by damp-off. *Begonian* 2004: 190-193

U307: Papua, New Guinea. Seed sent to **Carrie Karegeannes** by **Jan Goodwin**, Australia, 1992. Collected halfway between coast and highlands. Habitat: Limestone, rain annually. Flowers: Large, pink/red. *Begonian* 2004: 190-193, photo on 190.

U308: Costa Rica. Plant obtained from **Harry E. Luther**, Marie Selby Botanical Gardens, 1992. Rhizomatous: Semi-erect to 10", if staked rhizome can reach 20", branching with age, lenticellate. Leaf blades oblique, asymmetrical, 9" x 7", deeply cordate with lobes rarely over-lapping, species shortly acuminate, upper surface green with pale red nerves, scabrous, lower surface green with 9 red villous nerves. Petioles green flushed red, lenticellate, villous. Stipules persistent, pale green turning tan when dry, villous, keeled with villous extension at apices. Inflorescence extends high above foliage, profuse flowering. Male flowers white, 2 tepals, female flowers white, 2 tepals, capsules trilocular. Tentatively identified as *B. urophylla* by Thelma O'Reilly. *Begonian* 2004: 190-193

U309: {Don Miller collection, Malaysia <his MAL #2>} Penang, Malaysia. Collected by **Don Miller**, 1990. Rhizomatous: Leaves 13" x 9", silver with dark green nerves outlined with silver splashes making a beautiful pattern over the silver surface. Tentatively identified as a *Begonia rex* hybrid. *Begonian* 2004: 190-193

U310: Papua, New Guinea. Seed sent to Thelma O'Reilly by Jan Goodwin, 1992. Seed germination was followed by damp-off. *Begonian* 2004: 190-193

U311: Papua, New Guinea. Seed sent to **Thelma O'Reilly** by Jan Goodwin, 1992. Poor germination followed by damp-off. *Begonian* 2004: 190-193

U312: Papua, New Guinea. Seed sent to Thelma O'Reilly by Jan Goodwin, 1992. Habitat: Western end of Lake Kutuba. Open country, small amount of limestone: Poor germination followed by damp-off. *Begonian* 2004: 190-193

U313: [2002 J-F SF JF02-08. Notation that no description is available.] Singapore Botanical Garden. Seed sent to Thelma O'Reilly by Jan Goodwin, 1992. Poor germination followed by damp-off. Note: Seed generously donated by Jan Goodwin was shared with four excellent begonia growers. All reported poor germination and damp-off of seedlings. *Begonian* 2004: 190-193

U314: Listing 2006: 171 Bolivia. Plant material collected and deposited with Marie Selby Botanical Gardens, Sarasota, FL. Thick Stem. Large leaf blades are lobed and dark green with few silver splashes. Margin is serrated. The flowers are identical to flowers of *Begonia wollnyi* and *B. U176* Thelma O'Reilly.

U315: {SF 1998: 26 Madagascar. This plant is a medium shrub or hanging basket plant. It has medium dark green leaves, and profuse white flowers much of the year. This plant is characterized by swollen nodes along the stem.} {1999: 236 SF: Collected some years ago by Dr. Mardi Darian of Vista, CA. Semperflorens type plant makes a nice hanging basket and blooms profusely. At each branch from a node the stem is slightly swollen for about an inch.} [2002 J-F SF JF02-U#315; 2003 SF 36; 2004 31 SF; 2004: 180 SF; 2005: 25 SF] {Included as a Semperflorens in article by Peter Sharp, Australia. 2005: 177} Listing 2006: 171 Madagascar. Shrub-like begonia found growing on plant imported by **Dr. Darian** of Vista, CA. Specimen given to **Mabel Corwin** who grew it into a lovely green leaved semp-like shrub with swollen nodes and clusters of attractive, small white flowers. Thelma O'Reilly

U316: Listing 2006: 171 China, Yunan. Collected west of Yang Bi by **Bob Cherry**, Australia. Thelma O'Reilly

U317: Listing 2006: 171 China, Yunan. Collected by Bob Cherry. Tuberous. Difficult because new shoots go dormant quickly and fail to regrow. Thelma O'Reilly

U318:Listing 2006: 171 Phillippines. Seed sent to Jan Goodwin, Australia, from Prof.. **J.D. Doorenbos**.

U319: {1998: 26 SF: This unidentified begonia is a *B. cucullata* type, tall with large attractive white flowers.} Listing 2006: 171 South Australia. Seed collected by Thelma O'Reilly from an interesting *B. cucullata* type begonia in the beautiful enclosed garden of **Ted and Joyce Williams** in Adelaide, 1993. Masses of huge white flowers adorned the 6 ft.' tall plant. A 2004 planting of the original collected seed proved 100% viable. Seedling grown outdoors bloomed with large, bright pink flowers. Seedlings grown indoors under light bloomed huge, pristine white flowers. Note: Fresh seed is available in the Seed Fund. Thelma O'Reilly [2006 183: SF]

U320: [2002 J-F SF JF02-09. Ecuador. Similar to U237 which see and see *Begonian* Nov. 1995: 208; 2003 SF 36] Listing 2006:171 Ecuador. Collected in vicinity of Villacabamba by Marie Selby Botanical Gardens, Sarasota, FL in 1989. Terrestrial and lithophyte on soft conglomerate cliff with *Tillandsia tectorum* and *T. secunda*. Elebation about 1600 ft. in dry thorn scrub on steep slopes. Note: This tuber was given to O'Reilly in 1994. Growing it side by side with *B. U237*, collected in Ecuador by **Scott Hoover** in 1988, proves they are the same species. Identical rare traits appear on both species when flowering. The strong rose-like fragrance and the variable number of male and female tepals, from four to ten, on each plant. I am preparing an article on my many observations and discussions about a few other tubers species that have an unusual number of tepals. Thelma O'Reilly

U321: Listing 2006: 171 Mexico. Seed. No Germination Thelma O'Reilly

U322: Listing 2006: 171Malaysia Saban. Collected by **Kevin Hendreck**, Australia. Rhizomatous. Leaf blades 5 x 3 1/2" light green, ovate/acuminate. Margins and petioles hairy. Flowers bright pink, occasionally white. Thelma O'Reilly

U323:

U324:

U325:

U326:

U327:

U328:

U329:

U330:

U331: {SF 1997: 146: Thick-stemmed rhizomatous, first Ecuadorian collection of species tentatively identified as a form or variety of *B. sericoneura*, large green leaves, white or pink flowers.} [2002 J-F SF JF02-U#331; 2003 SF 36]

U332: {SF 1997: 146: Tuberous, identified as *B. biserrata* by T. O'Reilly, see the *Begonian* 1996, page 8.}

U333: {SF 1997: 146: Tuberous, identified as *B. pedata* by T. O'Reilly, see the *Begonian* 1997, p. 8.}

U334: {Don Miller collection, Malaysia <his MAL #3>} {Adopted by Doug Pridgen in Miami. 2005: 69}

U335: Lampung Province, Sumatera. Herb on road side embankment along highway. Elevation 1700 ft. WSH {1996: 69} [2002: 68 SF ; 2003 SF 36]

- U336:** Herb to 2 m. on steep stream embankment in shaded gorge along highway. Lampung Province, Sumatera. Elevation 2200 ft. Population scattered along cliff face. WSH {1996: 69} [2002 J-F SF JF02-U#336; 2003 SF 36] {02 May/ June 83, 120 Midori Nobuswa grew and photographed this.
- U337:** [2003 SF 36] {Identified by Mark Tebbitt and Thelma O'Reilly as *B. multangula*. 2006: 36}
- U338:**
- U339:**
- U340:** Herb to 1.5 m along edge of trail to top of Mt. Kaba, Bengkulu Province. Elevation 4450 ft. Fleshy, succulent plant with thick stem, large leaves, large whitish-pink flowers. WSH {1996: 69; SF 2000: 151} [2002 J-F SF JF02-U#340; 2003 SF 36] {Identified by Mark Tebbitt and Thelma O'Reilly as *B. multangula*. 2006: 36}
- U341:** [2002: 68 SF]
- U342:** Jambi Province. Shrubby upright rhizomatous type to 2 m. understory at edge of trail. Elevation 5600 ft. Leaves star-shaped, flowers large, fruit nodding. WSH. {96: 69}
- U343:** Upright herbaceous shrub. Elevation 6200 Ft. WSH collector. {96: 69}
- U344:** {Mention by Doug Pridgen in list of begonias growing well in Miami, 2005: 69}
- U345:** Lake Toba region, North Sumatra. Upright rhizomatous with vine-like habit to 1.5 m., creeping over forest floor and up bases of small trees in forest area. . Elevation 5500 Ft. WSH collector. {1996: 69} [2002: 68 SF; 2003 SF 36]
- U346:** Lake Toba region, North Sumatra. Upright herb to 1.5 m. on step shaded embankment above stream, Lake Toba region. Elevation 4600 ft. WSH collector. {1996: 69} [2002: 68 SF ; 2003 SF 36]
- U347:** Mr. Meropi, West Sumatra. Rhizomatous. Vine on shady stream embankment on Mt. Meropi. WSH. Elevation 4500 ft. WSH collector. {1996: 69} {2004: 175. Photograph was a show winner - photo not shown.}
- U348:** Upright rhizomatous herb in 50 cm. along trail in forest to Mt. Meropi summit. Elevation 6000 ft. WSH {1996: 69} [2002: 68 SF; 2003: SF 36]
- U349:**
- U350:**
- U351:**
- U352:** Herb with small leaves to nearly 1 m along dark stream margin. Elevation 6000 ft. WSH collector. {1996: 69} [2002: 68 SF ; 2003: 36 SF] {Identified by Mark Tebbitt and Thelma O'Reilly as *B. muricata*. 2006: 36}
- U353:** Shrub to 1.5 m along shaded stream embankment. Elevation 3700 ft. Long, narrow, lanceolate leaves and globular fruit. WSH collector. {1996: 69} [2002: 68 SF ; 2003: 36 SF] {Identified by Mark Tebbitt and Thelma O'Reilly as *B. longifolia*. 2006: 36}
- U354:** M. Lubukraya, North Sumatera. Herb to 60 cm. on steep slope. Elevation 4500 ft. WSH collector. {1996: 69} [2002: 68 SF]
- U355:** Herb to 1.3 m along stream embankments of forest trail to Mt. Talong summit. Elevation 6000 ft. {1996: 69}
- U356:**
- U357:** {Don Miller collection Malaysia <his MAL #6> Shrub-like although editor thinks of it as cane-like,, dark papery leaves, large pink flowers, reminiscent of those on U177, likes a lot of heat and high light.}

U358: {Don Miller collection Malaysia <his MAL #1>. Rhizomatous at or below soil with upright stems, leaves are lovely silvery green with texture of *B. hatacoa*, but leaves are large, lobed, maple like. Flowers are white, typical of this classification. Blooms September/December for editor, males 4 and females with 4 tepals, white.} {2003: 75, B. U.358 lost after it was sprayed for scale, effects of fungicides}

U359:

U360: {Mention by Doug Pridgen as adopted in SOS and identifies as bronze *B. tayabensis*. 2005: 69}

U361:

U362:

U363: {SF 1999: 72. Java. Attractive upright rhizomatous species with green leaves and white flowers. Easy to grow.}

U364:

U365: {SF 1999: 30. Large flowered rhizomatous found along a trail at 4000 ft. Sumatera.}

U366: {Sumatera, 4000'. Vine creeping on cliff wall near waterfall at end of trail out of Medansuri village, North face of Mt. Singgaland near Bukittinggi. Modest population distributed locally along cliff face and at base of a few trees and boulders downstream from falls. This species is not observed climbing trees, but creeps over rocks and on cliff face. Female flower has anthers raised on a prominent stalk; petiole and leaf are glabrous.}

U367: {Sumatera. Shrub type, collected same location as *B. U366*, but higher elevation. 1 m, delicate leaves and small flowers, serrated margin, well represented population on ridge trail, along slope above stream and at stream margin. Winged fruit, small flowers. Species may have some affinity to *B. isoptera*.}

U368: {Sumatera. Possible same species as *B. U366*, but likely may be different. Several individuals observed at 4800', were different, but down lower at stream margin; it likely is the same. Hybrid swarm?? A rhizomatous vine. The female flower on the upper elevation collection did not have the anthers raised on a filament, but arose directly from the sepals. Also, the female was nodding with a winged fruit.}

U369: {Modest population of an herb in stream, on boulders, and cliff wall along trail to waterfall, and at waterfall above Singkarak Sumpan Hotel, Lake Singkarak, W. Sumatera. Leaves are somewhat round, but with distinct obliqueness. Female flower with pronounced filament. Fruit is variegated, red at ovary, white wings.}

U370: {Collected by Scott Hoover, W. Sumatera, 4100'. One individual, large to 1 m. and sprawling over and its branches were rooting at the rhizomatous nodes. Large leaved, tall shrub, upright rhizomatous species with large white flowers, large nodding fruit.}

U371: {W. Sumatera, 4200'. Stream margin at Coffee Plantation at Ameara, above Bukit Kemiri Village near Padang Pan Jang, on Mt. Merapi. Observed at 3800', but only sporadic, modest population at this elevation, though only some individuals in flower, few with seed, petiole has long red hairs.}

U372: {W. Sumatera, 4800'. Same species as *B. U367*. Delicate, leaved shrub with small flowers. Species was well represented up to N 5000' along slope of gorge.}

U373: {W. Sumatera, 5000'. Likely same species as *B. U366*. Rhizomatous vine, same location as *U372*, in streams large population up to 5500'.}

U374: {Collected by Scott Hoover, W. Sumatera, 5500'. Same location as *B. U372*, further up stream. Possible affinity to *B. isoptera*, but leaves are much more serrated and female is pale green.}

U375: {W. Sumatera, 5100'. Further up trail from *B. U371*. Observed on shady or sunny embankment. There may be a question whether *U371* and this collection are the same. All collections of *B. U372* were quite small whereas *U375* was twice to 3 times the size and the morphology of the red hairs may be different between the two species. Rhizomatous vine with long red hairs on petiole.

U376: {Collected by Scott Hoover, W. Sumatera, 5400'. Likely same species as *B. U374*. Farther up trail and collected on first small gorge. The gorge where this collection was made also had a population of *B. isoptera*. The taxonomic complexity of this species and *B. isoptera* is severe.}

U377: {West Sumatera, 5500'. Trail up Mt. Merapi from Koto, Baru. This species clearly prefers the dark, shady stream embankments along steep, gorge walls.}

U378: {West Sumatera. SF 1999: 30 A beautiful rhizomatous found near waterfall along a trail at 5700 ft. Java. A very beautiful species with a horned fruit.}

U379: (Collected by Scott Hoover, West Java Province, 4000'. *Begonia muricata* affinity. Observed on rock ledges forming gorge wall. This species is a creeping vine, observed once as epiphyte.}

U380: {5000'. Shrub to 2 m., along stream and near base of waterfall on Mt. Bawakaraen, S. Sulawesi Province, village above town of Molino. A beautiful shrub with large white to pink flowers and leaves covered in a short stiff pubescence. Species flowers quite prolifically. Large population distributed along the stream margin and observed on cliff face adjacent (directly) to waterfall.}

U381: {Sulawesi, 100'. Tuberos species in large population along cliff walls at waterfall. Species is a small, round leaved type similar to one Thailand species with variegated leaves and small bulbils. Flower is pink/red.}

U382: {SF 1999: 72. Herbaceous shrub, collected along stream margin, flowers arising from leaf axils with wingless fruit. To 1 m., in patch of remanent forest along road from Polewali, S. Sulawesi Province. Rigid horns of equal length or approximately equal length, somewhat berry-like.}

U383: {S. Sulawesi, 4300'. *Begonia incisa* affinity?? Herb on small cliff face above river in deforested area below Lomaban}

U384: {From waterfall on ESE slope of Mt. Mambulinin, above Mamasa Village, S. Sulawesi. A few scattered individuals along trail within 1 km. of base of 70-80 m. waterfall. }

U385: {Same species as *B. U384* and *U. 382*. From stream margin approximately 60 kms. from Mamasa. Few scattered individuals.}

U386: {Shrub on limestone cliff face by central park in downtown Mekele, S. Sulawesi. Large white flowers, equally winged fruit. Likely a natural occurring species collected as a relic/remnant population in the middle of the town. This must be one of the most unusual collections I've ever made due to its being in such a human dominated environment.}

U387:

U388: {2003: Article on growing out of a terrarium by Tom Keepin of Houston, collected in North Vietnam, Nov. 6, 1996 by Mary Sizemore, 128-130, 129 photos} [2003: 155 SF; 2005: 28 SF; 2005: 98, 110 SF; 2005: 28 SF; 2006: 186 SF] {2003: 172 receives culture award at 2003 ABS Show} {2003: 213, being grown by Bill Claybaugh} {2004: 88 Photo by Janet Welsh of her plant of *B. U388*} {2004: 154-5 Jack Golding identifies *B. U388* as *Begonia longiciliata* C.Y. Wu. Drawings on 154.} {Mark Tebbitt says *U388* is not *B. longiciliata*, but a new species soon to be published. 2004: 234} {*U388* gets a New Name, *Begonia sizemoreae*, article by Ruth Kiew 2005: 43, 73, photo 72} {Mention by Nancy Mirgon, 2005: 67}

U389:

U390:

U391:

U392: Java. *B. acutifolia* type. 5500'. This species has a very narrow elevational range. It is most fascinating to recollect this Sumatera species here on Mt. Salak. Here is most likely the highest elevational range of the *Begonia*.

U393: {Java. 3200'. Sporadic at lower section of trail and more abundant at upper section. One large colony observed along road at 3500', the highest point from the gate to the research station. This may be the upper elevational range of this species. It was observed at an elevation of 3000' and reported to be more abundant. Same on Mt. Salak.}

U394: {Java. 3445'. Tuberos to 10-12 cms; fruit having a distinctive bulge at the base where the wing joins the ovary. Prominent red veins are observed on obaxial leaf surface. It appears this species has stomatal cluster, but cannot determine yet. It is likely this is a new species. One small population observed and only a couple of scattered individuals.}

U395: {Mt. Rancaupas. 5577'}

U396: {Mt. Salak. Likely new species.}

U397: { Mt. Rancapas. Likely new species.}

U398: {Mt. Salak, East Slope.}

U399: {Mt. Salak. 3937'. Likely new species.}

U400: {2003: 58, grows in Ft. Worth Botanic Garden}

U401:

U402: {Plant from John Howell who received it from a friend from Japan; listed as Venezuela species. Selfed seedlings identical to original. Very easy to propagate - even a tiny piece of leaf will make new plant. 2001: 236. 2002: 10} {Mention by Doug Pridgen as growing well in Miami. 2005: 69} {Show Winner, 2006: 134}

U403:

U404: {China. This begonia appeared in *Begonia*, the magazine of the Japanese Begonia Society, January/March 1998, #181, photo on back cover, with an article by Yumika Yamaguchi which was reprinted in the *Begonian* in 1998: 151 with photo. She thought it might be a variation of *B. hemsleyana*. She brought plants to several people at one ABS Convention.} {See also 2001: 153} {2003: 136 mention by Bill Claybaough for palmaely compond leaves} {cuttings B. U404 given to Nancy Mirgon by Mary Bucholtz, 2005: 67}

U405: {Seed from Diane Gould as Brazil #5 or #6. No description. Seed produced a thick-stemmed begonia, growing to 6' tall, with white flowers in winter to early spring; selfed seed produced identical seedlings.} {2004: 74. Photo by Thelma O'Reilly of her plant of *B. U405*.}

U406:

U407: Collected by Jim Hunter (Hoel at Machu Pichu, 7635 ft.) in Peru.

U408: Collect ed in Peru by Jim Hunter (Hotel at Machu Pichu). In appearance like *B. robusta*.

U409: Collected by Jim Hunter above Machu Pichu at 8500 ft.

U410: Collected by Jim Hunter in Peru alng trail from M.D. to Wixay Wayna, abundant rocky soil, shad.e. Red color on leaf.

U411:

U412: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 7600'. Possibly a close relative of *B. multangula*, but seems to be a different species. Distinguished by a more star-shaped leaf and habit. Different, growing in a mass colony at base of waterfall. Seems to be closely related and typical of *B. multangula*, but other characteristics are very different. Often observed with two inflorescences arising from leaf axils.} [2003: 36 SF; 2003: 184 SF; 2004: 31 SF; 2004: 180 SF; 2006: 28 SF; 1006: 186 SF]

U413: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 7600'. Species in the *Sphenanthera* section. Large population scattered commonly on North facing slope of mountain, top of mountain completely surrounded by Tea Planation. This species has 2 leaves/node, bullate leaf blade with strongly accentuated drip tips at terminal blade tip as well as at each terminating vein.} [2003: 36 SF]

U414: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 5000'. Species in the *Sphenanthera* section. Modest population scattered around flat area near entrance of jogging trail, 30 m. up highway up Mt. Patuha. Very limited felame flowers and fruit.} [2003: 36 SF; 2004: 31 SF; 2004: 180 SF; 2005: 28 SF]

U415: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 4600' - 5700'. Species in *Sphenanthera* section. Large, well established population along entire west slop of Mt. Pasiripis and periodically along ridge. Mountain is part of Telagabodas and Galunggung Mt. complex. Trail head at police gate about 4 kms. from Telagabodas geothermal road sign on Hwy. to eastern port of Garuet, West Java Province. Has clear affinities to the Puncak and Patuha species with its nodding fruit, drip tipped leaves, scandent habit, huge flowers (female 2.5" across), bullate leaf surface with long hairs, wing of fruit has different shape than the Puncak and Patuha species, especially shape and sculptural growths at tip of wing on many mature seed pods. Species observed in several large colonies dominating entire multi-meter areas, much like *B. multangula* and *B. robusta* on Mt. Salak. The scandent habit of the species allowed it to fall over, rest at the node, and produce more stems from the original fallen shoot. The Patuha species did the same thing, but not Puncak. When a growing stem leans against some other rigid object, be it another non-begonia stem, rock, tree trunk, etc., it will grow straight up. Internodes and petioles were up to 50 cms. long. 2 leaves/node.} [2003: 36 SF; 2006: 28 SF; 2006: 155 deleted from SF listing] {2003: 80 photo; article 51} {2003: 43, 80 photo} {Identified by Mark Tebbitt and Thelma O'Reilly as *B. alveolata*. 2006: 36}

U416: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001 at 5600'. Much longer leaves than *B. U412* (Up to 15 cm.) due to growing on forest floor, usually observed as single individual, multi-branched shrub to 1.5 m. tall. Same location as *B. U415*, observed only at highest elevation on exploratory sampling.} [2003: 36 SF] {Identified by Mark Tebbitt and Thelma O'Reilly as *B. alveolata*. 2006: 36}

U417: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 5400'. Pubescent variety only observed. Same location as *B. U415*.} [2003: 36 SF] {Identified by Mark Tebbitt and Thelma O'Reilly as *B. multangula*. 2006: 36}

U418: {Collected by Hoover, Hunter, Wiriadinata Expedition, Indonesia, 2001. 5300'. *B. acutifolia* type. Observed only as scattered individuals in the gorge area near Lake Telagabodas and as individual in forest at the Cipanas area. The fruit on this species is basically an equally unwinged oval or football shaped fruit. Only a couple of seed pods found, no male flowers.} [2003: 36 SF]

U419: {Collected by Hoover, Hunter, Wiriadinata Expedition, Indonesia, 2001. 5400' - 6300'. Ridge directly above TV transmitter station on Mt. Cikuray above Tea Plantation, accessed by trail from station and gorge to north of ridge. Abundant, well established population observed quite close to beginning of remanent strip of forest along ridge crest and more commonly observed in gorge. Species shows variation in leaf characters and possibly fruit as well from population observed around the Mt. Telegabodas complex. 1. Leaves are much less apiculated, the drip tips are not as established as a morphological character. In fact, in many individuals the leaves are simply lobed. 2. Fruit seems to have a characteristic slight hook at the tip.}

U420: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 6200'. Sporadic individuals observed in gorge to 2-2.5 m. tall, w/the largest leaves yet observed, up to 20 cms. w/their long white hairs still prevalent and the slight wings on the fruit making their distinction.}

U421: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 3500'-4600'. East facing slope of Mt. Ciremay, accessed from Linggarjati area above clove and new coffee plantations. Rather dry forest dominated by a number of different understory herbs, including an *urtica* and what seems to be a *labitae*. This species is clearly related to *B. U412*, *416*, and *420*, but it is distinct enough in its characters that it may be a separate, different species if not the same species. It is distinct on the following characteristics: 1) fruit is much larger and the structure of the inflorescence may be quite different; 2) wings on the fruit are less defined than *B. U412*, etc. and covered with short, red hairs; 3) overall plant has much denser pubescence than *B. U412*, etc., hairs are white and form more of a mat than the others which have long white hairs that are widely spaced from each other; 4) leaves are lobed, up to 35-40 cms. long, unlike apiculated *B. U412* relative. Never with 2 leaves/node; 5) few branched herbaceous shrub; *B. U412* has more branches; 6) not a colonial species, scattered individuals on both Mt.'s Ciremay and Zirkurny. This species was rarely ever observed in colonies, generally as scattered individuals across the entire mountain slope.} [2003: 36 SF]

U422: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 4700' Has an affinity to *B. tenuifolia*. NW facing slope on Mt. Tangkubanperaho, near stream. Same as *B. U412*.} [2002: 68 SF new seed]

U423: (Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. Has affinity to *B. tenuifolia*. Only observed a few times as single individuals. Has the appearance of being a natural hybrid between *B. multangula* and *B. tenuifolia*, though of course unknown. Plant grew to 2 m. tall with petioles to 60 cms, covered with long white hairs. Has many characteristics similar to *B. tenuifolia* collections, especially *B. U421* collection from Mt. Ciremay, but very different in leaf shape. It clearly is not *B. multangula*, but has the "typical" *B. multangula* berry-like horned fruit and a star-shaped leaf, though distinctly different.) [2003: 36 SF] {Identified by Mark Tebbitt and Thelma O'Reilly as *B. multangula*. 2006: 36}

U424: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 4700'. This species is new to us, with the possibility it may be the same species that we collected once on Mt. Cikuray. Large shrub-type *Sphenanthera* with horned fruit, red, long hairs. Several individuals observed along road side embankment in small colony. Only time this species was observed.} [2003: 36 SF]

U425: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 4600'. May possibly be a hybrid of *B. U418* and *B. isoptera*. Restricted to several large colonies within about 7 m. of each other. It appears to be a hybrid swarm less developed with considerable variation observed in all character traits.} [2003: 36 SF] {2003: 41 photo; 43 reference to article, 51}

U426: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 5' (sea level). Tuberos. Rocky embankment along highway near Pelabuhanratu and growing on heavily shaded boulders along trail up hill near highway. A well established population swarming on rocky boulder surfaces. Not in flower, but collected a few stragglers and some seed.}

U427: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. 2700' - 3400' Possibly *B. muricata*. West facing slope of Mt. Halimun South, Halimun National Park. Primary forest above rice terraces near Ciptarasa village. Massive population covering slope. Largest population of this species I have ever observed. This population is quite hairy, covered with rather long white hairs on leaf blade, petiole, inflorescence. Besides leaf surface being covered with hairs, it seems to be somewhat pustulated. [2003: 36 SF] {Identified by Mark Tebbitt and Thelma O'Reilly as *B. muricata*. 2006: 36}

U428: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. Tuberos. 1500'. Cliff walls along roadside about 8 kms. from Bagbagan bridge along road to Janipangdulou from Pelabuhan. Modest population in some flower and fruit. Cliff walls are exposed and dry. No seed.}

U429: {Collected by Hoover, Hunter, Wiriadinata, Indonesia, 2001. 2300'-2400'. Disturbed trailside along path to waterfall in Rinjani National Park on south side of the island. A modest population of scattered individuals along trail before waterfall. This population exhibits a variation in color and fruit size: red stems and veins are prominent and the fruit is much smaller than the typical *B. longifolia*.} [2003: 36 SF] {Identified by Mark Tebbitt and Thelma O'Reilly as *B. longifolia*. 2006: 36}

U430: {Collected by Hoover, Hunter, Wiriadinata Expedition, West Java, Indonesia, 2001. Affinity to *B. tenuifolia*. 2600'. Population modest in size to within 200 m. of waterfall and several small individuals observed on boulders just below waterfall in gorge area. A glabrous variety of the, if not the same species; all part of a possible complex.}

U431:

U432: {Identified by Mark Tebbitt and Thelma O'Reilly as *B. breedlovei*. 2006: 36}

U433:

U434: Rhizomatous species from Mexico and Central America, published in 1950 by Standley & Williams as *B. Barsoluxii*, but is a synonym for *B. plebja* in *Begoniaceae, Edition 2*. Identified by Dr. Kathleen Burt-Utley. {Mention by Nancy Mirgon, 2005: 67}

U435:

U436:

August 2010

U437:

U438:

U439: Collected by Jacques Jangoux in Brazil. Seed supplied to Freda Holley and Tamsin Boardman. Uncertain if shrub-like or thick stem. See article, 2006: 194-195 {Grown by Ivy McFarlane. 2006: 217}

U440: Collected by Jacques Jangoux in Brazil. Seed supplied to Freda Holley and Tamsin Boardman. Freda Holley believes it is likely a form of *B. reneformis*. Thick stem. See article, 2006: 194-195. {Grown by Ivy McFarlane. 2006: 217}

U441: Seed collected in Brazil and given to Morris Mueller who also gave them to Freda Holley. Identifying number was 1P-016-99 with notation that it was a trailing plant with red flower. Number at end "99" likely indicates year collected. Both Freda Holley and Morris Mueller grew them to get white flowers so this may have been a hybrid. Leaves get extremely large for a trailing scandent.

U442: {Seed collected in Brazil and given to Morris Mueller who also gave them to Freda Holley. Identifier was 1P-014. Thick stem, very tall plant with deeply lobed leaf, not unlike that on *B. aconitifolia*, but plain green. Freda Holley noted that it was not all cold-hardy, being killed at much higher temperature than most thick-stem begonias from Brazil; likes heat. White bloom in winter, 4 tepals on male, 3/4;.} [2006: 155 SF.]

U443: [2006: 28 SF]

U444: Begonia from Tim Anderson to Mike Kartuz. In 8/23/05 correspondence Charles Jaros identifies this as a thick-stemmed species from Brazil, seeds acquired by Morris Mueller, Sacramento, CA - this is likely same as U442. [2003: 284 SF; 2004: 31 SF; 2006: 28 SF]

U445:

U446: { 2004: 126-7. Charles Jaros describes form and growing conditions and Mary bucholtz and Johanna Zinn photographed *B. U446*. Collected by Mary Sizemore in 1996 in BA-VI National Park, North Vietnam in area ner Hanoi at approximately 2000' in an understory forest and growing terrestrially at approximately 2 ft. tall. Shrub-like, light green leaves with veins that are slightly red. Leaves 5 1/2" long and 1 1/2" wide. Flowers are a light pink and occur along the stem of the plant at leach leaf/branch axil.} {Shrub-like begonia collected by Mary Sizemore from DeLand, Florida in the fall of 1996 in BA-Vi National Park, North Vietnam, near Hanoi. Identified by Mark Tebbitt as *B. acetosella* var *acetosella* published in 1927 by Edgar Irmischer. It is also found in Thailand, Burma, and China. Correspondence from Charles Jaros, August 23, 2005.}

U447:

U448:

U449:

U450:

U451: [2004: 67 SF B. U.451 \$3.00. This seed is from Vietnam where the plant was found growing in soil and rocks. It was found growing at Boa Loc at an altitude of 3000 feet. Its habit is rhizomatous with leaves almost black above and red underside, forms quite a nice plant with quite a few leaves.]

U452: [2004: 67 SF B. U. 452 \$3.00. This seed is from Vietnam where the plant was found growing in rocks in dense forest at an altitude of 5000 feet on the slopes of Elephant Mountain. Its growth habit is rhizomatous with small lobed green leaves, plants remain about 8 inches in height with the spread of the plant not much more.]

U453:

U454:

U455:

U456:

U457:

U458:

U459:

U460:

U461: {2004: 212-218. Rekha Morris collected this in Mexico. Orbicular foliage terminating in two tail-like appendages at the lower extremity. Identified by Patrick MacMillan as *B. involucrata*. Photo on 215..} {Collected by Rekha Morris in Vera Cruz, Mexico. Identified as *B. involucrata*, documented in Vera Cruz for first time. Correspondence from Rekha Morris, 9/27/05}

U462: {2004: 212-218. Rekha Morris collected this in Mexico on the way to Ismus of Tehuantepec., growing among 3' tall grass. and later in 2 other locations. Foliage reminiscent of *B. barkeri*. {Collected by R. Morris in Mexico. *B. heracleifolia* x *B. nelumbifolia* with dissected, palmate leaves which resemble *B. heracleifolia*, but which are also peltate like *B. nelumbifolia*. (Correspondence from Rekha Morris, 9/27/05} {Mentioned by Rekha Morris as "a natural hybrid of *B. heraceifolia* and *B. nelumbiolia* in its parentage." 2005: 88} {2007: {2006: 27-28, 26 photo}

U463: Collected by R. Morris. *B. pinetrum* x *B. carolineifolia*. (Correspondence from Rekha Morris, 9/27/05) {2004: 212-218. Rekha Morris collected in Mexico, photo listed as a natural hybrid of *B. pinetorum* and *B. carolineifolia*.} {2006: 27-28, 26 photo}

U464: Collected by R. Morris. It appears that this is not a natural hybrid, but a form of *B. barkeri*. (Correspondence from Rekha Morris, 9/27/05) {2006: 27-28, 26, 31 photo}

U465:

U466: [2004: 231 SF Indonesia]

U467: Collected on Sumbwa by Deden Gyrmanshah at 1100 meters. (Correspondence from Mary Fuqua on 8/23/05.) [2004: 231 SF Indonesia]

U468: Collected on Sumbwa at 1100 meters. Tuberos species. (Correspondence from Mary Fuqua on 8/23/05) [2004: 231 SF Indonesia]

U469: [2004: 231 SF Indonesia]

U470:

U471:

U472:

U473: Collected by Mary Sizemore in Vietnam. Rhizomatous. (Correspondence from C. Jaros, 8/23/05)

U474: Rhizomatous species from China, introduced by Patric Worley, CA. (Correspondence from Charles Jaros, 8/23/05).

U475: Collected by Mary Sizemore. From China. Rhizomatous. (Correspondence from C. Jaros, 8/23/05)

U476: Collected by Mary Sizemore in Vietnam. Rhizomatous, possible related to *B. versicolor*. (Correspondence from C. Jaros, 8/23/05)

U477: Collected by Mary Sizemore; purchased frm Kai Chen Nursery, China. Rhizomatous. (Correspondence from C. Jaros, 8/23/05).

- U478:** Collected by Mary Sizemore. Rhizomatous. According to Mark Tebbitt this may be a new species. (Correspondence from C. Jaros, 8/23/05)
- U479:** Collected by Mary Sizemore in Thailand, purchased from local nursery. Rhizomatous, *B. decora* like). Correspondence from Charles Jaros, 8/23/05).
- U480:** Collected by Mary Sizemore in Vietnam. Rhizomatous. (Correspondence from C. Jaros, 8/23/05) {Identified by Mark Tebbitt and Thelma O'Reilly as *B. handelii* var. *handelii*. 2006: 36} {Show winner, photo. 2006: 131}
- U481:** Collected by Mary Sizemore in Chang Mai, Northern Thailand, purchased from a local nursery. Identified by Mark Tebbitt as *B. silletensis* subspecies *mengyangensis*. Rhizomatous, only found in small parts of China. Sweetly scented flower, hardier than some begonias. *B. silletensis* is the typical species found in India, Thailand and Burma. (Correspondence from Charles Jaros 8/23/05).
- U482:** Collected by Mary Sizemore. Rhizomatous, possibly a hybrid. (Correspondence from Charles Jaros, 8/23/05.) Identified by Carmel Browne, Australia as *B. 'Tangalooma'*, a hybrid by J. Clares of Australia, parents: *B. 'Eureka Bonanza'* x *B. 'Joe Hayden'*. (Correspondence from Jack Golding, 8/14/05).
- U483:** Collected by Mary Sizemore. Shrub-like. (Correspondence from Charles Jaros 8/23/05).
- U484:** 2006: 234 Article and photo by Gene Salisbury. Charles Jaros reports import by Mary Sizemore from Thailand. Rhizomatous; seems hardy in cold and heat.
- U485:**
- U486:** Acquired by Johanna Zinn. Dr. Mark Tibbett States this rhizomatous begonia may possibly be of Chinese origin. (Correspondence from Charles Jaros 8/23/05.)
- U487:** Collected by Mary Sizemore, eastern slopes of the Andes. Shrub-like. (Correspondence from Charles Jaros 8/23/05).
- U488:** Collected by Mary Sizemore of Deland, FL, eastern slopes of the Andes. (Correspondence from Charles Jaros, 8/23/05).
- U489:** Collected by Mary Sizemore in Vietnam. Rhizomatous. (Correspondence from C. Jaros, 8/23/05)
- U490:**
- U491:** Collected by Mary Sizemore in Ecuador. Shrub-like. (Correspondence from Charles Jaros, 8/23/05).
- U492:** [2005: 195 SF; 2005: 224 SF]
- U493:**
- U494:** Collected by R. Morris in Mexico. It appears to be a form of *B. barkeri* distinguished by prominent red veins which become far less marked on mature foliage. (Correspondence from Rekha Morris, 9/27/05) {2006: 27-29, 26 photo. Reported by Rekha Morris to be a natural hybrid, possibly of *B. barkeri* and *B. manicata*.}
- U495:**
- U496:** {Show Winner grown by Mary Bucholtz. 2006: 135; article by Mary Bucholtz with photos; believed to be a new species. grown in terrarium. From Vietnam 2006: 150-153; front cover; Show Winner grown by Mary Bucholtz. 2006: 35} 2007: 70. Vietnam. Seed collected by **Mary Sizemore** in spring of 2002. Tuberos. **Mary Bucholtz** has written a comprehensive article about this fascinating new species for the Begonian. See Vol.73, July/August 2006, pages 151-153. Note color cover. Thelma O'Reilly

U497: 2007: 70 Bangkok, Thailand. Plant purchased by **Dale Sena** at a plant market June, 2005. Rhizomatous. Leaf blades ovate, glabrous, dark reddish green with pinkish red eye at umbo and same color veins extending over upper blade surfaces, under surfaces burgundy red. Margins slightly dentate with short, pale red hairs. Petioles red with scattered pale red hairs and beige scattered lenticels. Stipules are most interesting. About 1 inch long with several keels and long hairs on keels and margins, quickly deciduous. Male flower buds glabrous, bright pink opening to white flushed pink with 4 tepals. Possible new species reported by **Hieu Nguyen**. Thelma O'Reilly

U498: 2007: 70; photo 71, 80. Texas, Fort Worth Botanical Garden. Plant labeled ANON#3. Rhizomatous. Upper leaf blade surfaces soft green covered with short white hairs, under surfaces and veins covered with slightly bristly red hairs. Marginally red and ciliate. Petioles, green, succulent, densely covered with red hairs and trichomes. Peduncles and pedicels have sparse black hairs. Flower buds covered with reddish black hairs opening into white flowers with blackish hairs sometimes tinged red at edges of tepals' backs. Ovary, with at least 6 wings, sparsely covered with black hairs. Thelma O'Reilly

U499: 2007: 70 Asia. Plant material collected by **Mary Sizemore** prior to Fall 2004. Rhizomatous. Leaf blades iridescent apple green. Petioles red. Flowers white. Possible new species reported by Hieu Nguyen. Thelma O'Reilly

U500: 2007: 70, 74 photo. N. Vietnam. Plant material collected by Hieu Nguyen prior to October 2005. Leaf blades green sparsely covered with red hairs. Margin edged red. Hieu Nguyen reports this is a new species.

U501: 2006: 7, 71 photo. Asia. Plant material collected by Mary Sizemore in summer of 2005. Leaf blades green, undersurfaces red. Margins edged red. Petioles maroon with white pubescence. Thelma O'Reilly

U502: 2007: 70, 71 photo. Asia. Plant material collected by Mary Sizemore in summer of 2005. Leaf blades green, undersurfaces red with red veins. Margins edged red. Petioles red, covered with bristly red hairs. Male flowers white and pink with 4 male tepals. Thelma O'Reilly

U503: 2007: 75 Atlanta Botanic Garden. Plant material acquired by **Charles Jaros**, June, 2004. No information was available. Leaf blades green, succulent, with burgundy undersurfaces. Petioles green. Thelma O'Reilly

U504: 2007: 75 Asia. Plant material collected by **Mary Sizemore**. Rhizomatous. Leaf blades green, upper and under surfaces have a bronze cast, peltate, acuminate. Dainty pink flowers rise above the foliage. Thelma O'Reilly

U505: 2007: 75 Asia. Plant material collected by Mary Sizemore prior to November 2002. Rhizomatous. Leaf blades green, lightly spotted, pustular, ovate. Margins ciliate. Petioles hairy. Thelma O'Reilly

U506: 2007: 75 Asia. Plant material collected by Mary Sizemore prior to October 2005. Rhizomatous. Leaf blades green, iridescent, lightly spotted, red netted veins on both surfaces. Margins ciliate. Petioles red and pubescent. Thelma O'Reilly

U507: 2007: 75 Asia. Plant material collected by Mary Sizemore prior to July 2005. Rhizomatous. Leaf blades green, unevenly iridescently silver splashed. Margins ciliate. Petioles red, pubescent. Thelma O'Reilly

U508: 2007: 75 Lyon, France. Plant material obtained by Charles Jaros from **Cheryl Lenert**, TX who purchased it in France November, 2005. The begonia supposedly originated in Malaysia. Rhizomatous. Leaf blades silvery maroon/black, undersurfaces burgundy, cordate, acuminate. Rhizomes upright. Petioles burgundy, pubescent. Flowers pinkish white. Thelma O'Reilly

U509: 2007: 74- 75 Photo. Peru. Plant material collected by Mary Sizemore, 2005. Classification undetermined, but appears to be thick-stemmed or upright rhizomatous. Leaf blades silvery green, ovate, with white pubescence. Margins serrate. Petiole green blushed red. Peduncles and petioles green flushed red. Flowers pink. Thelma O'Reilly

U510: 2007: 2006: 74- 75 Photo Asia. Plant material collected by Mary Sizemore prior to November 2005. Rhizomatous. Leaf blades green, thinly textured with white pubescence on upper surfaces. Margins dentate. Petioles red, covered with short white hairs. Thelma O'Reilly.

U 511: Brazil. Plant material obtained by Charles Jaros in summer of 2005 from Powerhouse Orchids, Deland, FL. Owners wife brought plant from Brazil. It bears a resemblance to *Begonia luxurians*, but there are differences. The leaf blades undersides are a dark reddish color and the habit is much fuller according to Jaros.

U512: This begonia species is grown by Charles Henthorne, Plano, Texas. The name he grow it under is *B. xanthina* var. *picta*. He would appreciate confirmation of the name. Note: The latest publication of *Begoniaceae*, Edition 2, by Jack Golding lists *B. xanthina* var *picta* as a synonym of *B. xanthina*.

U513: Asia, possibly Vietnam or Thailand. Plant material collected by Mary Sizemore in Fall of 2001. Rhizomatous. Rhizome upright, jointed at or below soil surface. Leaf blades ovate, green, lobed with sparse bristly hairs giving a rough texture to upper and undersides of blades. Petioles glabrous, red, four sided. Staminate flower buds white.

U514: Asia. Plant material brought from Thailand by Bruce Pearson of Tropical World. Rhizomatous. Leaf blades bronzish dark green with light green veins, under-surface dark red with raised green flushed pink veins, scabrous on blade surface and veins. Petioles glabrous, bronzish green. Stipules membranous, keeled. Staminate flowers pink, 4 tepaled. Peduncles and pedicels pinkish red.

U515: Thailand. Plant material collected by Mary Sizemore in 2004. Leaf blades green, ovate, elongated slightly pebbled with thickened texture, under surface green with bronze veins. Petioles red, red spot at umbo. Staminate flowers white emerging from leaf axils.

U516: Vietnam. Plant material collected by Mary Sizemore. Cane-like or shrub-like. Leaf blades green, silver/pink spotted, undersurface green with red veins. Margins silver, serrate. Petioles red, free branching. Staminate flower buds small, ivory edged with pink.

U517: Peru. Collected by Mary Sizemore prior to November 2005. Shrub-like. Leaf blades green splashed with silver, elongated, yellow/green veins. Staminate flower buds greenish ivory. Peduncles pink. Pedicels greenish ivory.

U518: Vietnam. Plant material collected by Mary Sizemore prior to November 2005. Rhizomatous. Leaf blades forest green, leather-like with red webbing, under-surface red with red webbing. Pistillate flowers white flushed pink.

U519: Vietnam. Plant material collected by Mary Sizemore prior to November 2005. Rhizomatous. Leaf blades green, pubescent, lobed. Petioles bronze, pubescent.

U520: Vietnam. Plant material collected by Mary Sizemore prior to November 2005. Rhizomatous. Leaf blades green with silver highlights, pustulate with red hairs, bronze veins. Leaf blades undersurface green with white hairs, red veins with red dotted margin. Margins sparsely hairy with few intermittent red dots.

U521 : Thailand. Plant material purchased by Charles J. Jaros and Maxine R. Zinman, Bangkok, Summer 2007. Rhizomatous, upright, entire, sub-entire. Leaf blade large, pilose, silver splashed, veins glabrous, umbo red. Undersurface prominent red veins, pilose both veins and undersurface. Margins entire, sub-entire, hirsute, red. Petiole light burgundy, velutinous, red. Peduncle red, velutinous, red, bud stipules velutinous, red, staminate flower white to light pink, top and bottom tepals pointed, reverse pilose, red, pistillate flower white to light pink, 3/4 to 1 inches, five tepals, pointed, reverse pilose, red, winged ovary pilose, red. Written description by Mary Bucholtz, Charles Jaros at request of Thelma O'Reilly 5/31/09.

U522: Collected by Rekha Morris, 2005-2008, India, Eastern Himalayas of Arunachal Pradesh, W. Kameng. Cane like with red flowers, new to India. Rekha Morris' notes New species named and described, *Begonian* Vol. 75 Nov./Dec. 2008, pg. 208, by Rekha Morris. Patrick McMillan, and Jack Golding, *B. sikkimensis* A. de Candolle var. *kamengensis* R. Morris, P.D. McMillan & J. Golding.

U523: Collected by Rekha Morris, 2005, India, Eastern Himalayas of Arunachal Pradesh, Papumpare, approx. 1000'. Growing on steep cliffs above stream, in environs of Itanagar. Also collected lower Subansiri, 1200'. Rekha Morris' notes

U524: Collected by Rekha Morris, 2006, India, Western Ghats, Kerala, approx. 500'. Now *B. malabarica* forma *spockii*. Rekha Morris' notes

U525: Collected by Rekha Morris, 2007, India, Western Ghats, Karnataka, 2000-2500'. In 2007, approx. 1500-4000'. Species growing profusely on rocks in Karnataka. Rekha Morris' notes

U526: Collected by Rekha Morris, 2005, 2006, 2007, India, Eastern Himalayas of Arunachal Pradesh, only W. Kameng, 5000'. Species with 5 red splashes on reverse of each leaf, baccate fruit. Rekha Morris' notes

U527: Collected by Rekha Morris, 2006, India, Eastern Himalayas of Arunachal Pradesh, E. Siang, approx. 1200'. Species with white hair on foliage. There is also a form of this with maroon-green leaves. Rekha Morris' notes

U528: Collected by Rekha Morris, 2006, 2007, 2008, 2009, India, Eastern Himalayas of Arunachal Pradesh, W. Kameng, N. of Sessa, approx. 2000'. Cane like sp. tentatively identified as *B. dux*? Rekha Morris' notes

U529: Collected by Rekha Morris, 2006, 2007, 2008, 2009, India, Eastern Himalayas of Arunachal Pradesh, E. Siang, approx. 500-800'. Since I invariably saw these growing with *B. burkillii* and *B. aborensis*, I assumed that these were natural hybrids of these two species. (Additional photos from Kamlang, Lohit, Dec. 2007, approx. 250-300'. Similar to one from Siang, no *B. burkillii* in vicinity. Perhaps a distinct sp. rather than a hybrid, red splashed on reverse foliage. Same as U529?) Rekha Morris' notes

U530A: Collected by Rekha Morris, 2005-2007, India, Eastern Himalayas of Arunachal Pradesh, W. Kameng. Green form of *B. rex* Putzeys. Rekha Morris' notes

U530B: Collected by Rekha Morris, 2005-2007, India, Eastern Himalayas of Arunachal Pradesh, W. Kameng. Purple/maroon form of *B. rex* Putzeys. Rekha Morris' notes

U531: Collected by Rekha Morris, 2005, 2006, 2007, India, Eastern Himalayas of Arunachal Pradesh, W. Kameng, Lower Subansiri & E. Siang, approx. 1000-1500'. Small leaved sp., from Siang: silvery green foliage. Rekha Morris' notes

U532: Collected by Rekha Morris, 2005, 2006, 2007, 2009, India, Eastern Himalayas of Arunachal Pradesh, W. Kameng, 1000-1500'. *B. thomsonii*? Caulescent leaves, ovate acuminate hispid beneath, denticulate-ciliate not lobed; petioles densely shaggy, bracts, cyme & ovary shaggy, with red stems and roots. Jan. 31, 2009, W. Kameng, 5000' More convinced that this is *B. thomsonii*. The examples of U532 from W. Kameng are quite similar in the red hair covering the stems & foliage, the leaf type, and growth habit. However, in W. Kameng they grow around 5000' and in the Jaintia Hills at about 300'. Both are areas of high ambient humidity. *B. thomsonii*, collected Dec. 25, 2008. Jaintia Hills near Dauki, Meghalaya. These plants of *B. thomsonii* were documented by following directions indicated on specimens in the herbarium of the Botanical Survey of India, Eastern Circle, in Shillong. Rekha Morris' notes

U533: Collected by Rekha Morris, Oct., 2005, Mexico, Oaxaca, Ca. 800'. Species from above Sandy River, (two forms). Rekha Morris' notes - Named and described, *The Begonian*, Vol. 77, May/June, 2010, pg. 88, by Rekha Morris and Patrick McMillan, *B. pseudodaedalea* McMillan and Morris

U534: Collected by Rekha Morris, Oct., 2005, Mexico, Oaxaca, ca. 500-800'. Species on rocks along river beyond Xanadi. Rekha Morris' notes

U535: Collected by Rekha Morris, Jan., 2005, 2006, 2007 Mexico, Oaxaca, Ca, 3500-4500'. Grows in and around waterfalls. Growing in cascades towards Zacatepec. Rekha Morris' notes - Named and described, *The Begonian*, Vol. 77, Mar./Apr., 2010, pg. 51, by Rekha Morris and Patrick McMillan, *B. morrisiorum* McMillan and Morris. Supplement for *B. morrisiorum*, *The Begonian*, Vol. 77, May/June, 2010, pg. 93, by Rekha Morris

U536: Collected by Rekha Morris, Oct., 2005, Mexico, Oaxaca, ca. 2000'. Related to *B. sartorii*, towards Totontepec. Rekha Morris' notes

U537: Thailand. Plant material purchased by Charles J. Jaros and Maxine R. Zinman, Bangkok, summer 2007, Rhizomatous, large leaved, entire, sub-entire, margin strigose, medium green, pilose white, red umbo, faint red veins, palmate-pinnate, radiate from umbo. Undersurface light green with very pronounced red veins. Petiole tan, pilose, white. Written description by Mary Bucholtz, Charles Jaros at request of Thelma O'Reilly 5/31/09.

U538: Thailand. Plant material purchased by Charles J. Jaros and Maxine R. Zinman, Bangkok, summer 2007. Rhizomatous, entire, sub-entire, margin hirsute, silver grey-green, muricate, palmate venation radiates from a cream umbo. Undersurface pale burgundy. Petiole pale green. Pistillte flower white, edge of tepals pale pink with white and green ovary, slightly pilose, white. Peduncle pale green, pilose, rise slightly above foliage. Written description by Mary Bucholtz, Charles Jaros at request of Thelma O'Reilly 5/31/09.

U539: (TOR assigned U number, 2007)

U540: (TOR assigned U number, 2007) Plant material collected by Scott Hoover. Cutting sent to Charles J. Jaros by Mary Fuqua, 2007. Shrub-like, thin papery leaf, new leaf silver, maturing to a silvery green with silver spots, large deep rusty brown palmate veining. Undersurface pale silver-green, veins show paler color. Petioles smooth, slim, deeper rusty-red color with rusty green stipules at leaf nodes, Written description by Mary Bucholtz, Charles Jaros at request of Thelma O'Reilly 5/31/09

U541: Collected by Rekha Morris, 2007, India, Arunachal, Kamlang, Lohit, approx. 250-300'. Rough leaved sp. like ones from Kamlang. Rekha Morris' notes

U542: Collected by Rekha Morris, 2007, India, Arunachal, Lohit, Kamlang and beyond Hawa Pas, approx. 4500'. Red splashed, cordate leaved sp. In Jan. 2009 found succulent fruit on plants of this species in exact same location as documented previously at 4500' in Lohit, Arunachal Pradesh. Peculiar growth habit 8-10" above the rhizome, a cluster of leaf stems develop, and this is repeated again further along the main stem. Rekha Morris' notes

U543: Collected by Rekha Morris, 2007, India, Arunachal, Lohit, approx. 1500'. Lax, dark stems, growing in mushy habitat. Additional collection above Tidding River, Siang, Arunachal Pradesh, Jan. 19, 2009, ca.1500', foliage dark green. Although the foliage collected in 2007 is silvery in the images used, they were documented growing in deep shade, and when grown here in South Carolina their foliage was dark green. The capsules of the two collections look similar. Did not find any flowers. Both these species have lax, dark, almost black stems, glossy, dark green leaves, and grow in extremely mushy conditions. Rekha Morris' notes

U544: Collected by Rekha Morris, India, Lohit, 1500-3000'. Now identified as *B. palmata*. Rekha Morris' notes

U545: Collected by Rekha Morris, Dec. 2007, & Jan. 2009, India, Lohit, approx. 1500-2000'. Now identified as *B. cathcartii*. Rekha Morris' notes

U546: Collected by Rekha Morris, 2007, India, only in E. Siang 1000-1200'. One sp. which is rhizomatous & forms clumps, & the other roots, at nodes, where it touches the ground, [only in Siang] & is fibrous rooted. This latter sp. grew in dense shade under large ferns. Jan. 19, 2009, E. Siang, Arunachal Pradesh, approx. 2000'. Found a single large colony growing close to a colony of *B. burkillii*. The foliage was for the most part badly damaged by insects, but new leaves which grew in the zip lock bag a few weeks later were quite striking as seen in the images. Striking red veined reverse foliage. Rekha Morris' notes

U547: Collected by Rekha Morris, 2005, 2006, 2007, India, Papumpare, 1000'. Sp. from deep gorge towards Gohpur. On Jan. 14, 2009, documented robust plants of this species, purple reverse foliage, growing in and around the gorges south of Itanagar, Papumpare, Approx. 1000'. Rekha Morris' notes

U548: Collected by Rekha Morris, 2005, India, Papumpare, from beyond Ganga Lake, 1000'. Foliage like that of *B. phrixophylla*, documented in the Western Ghats of Peninsular India but not in Arunachal or anywhere in northeast India. Rekha Morris' notes

U549: Collected by Rekha Morris, 2007, India, Moodbidri, Karnataka, Western Ghats, 300'. Probably a hybrid from private garden [Soans estate]. A stunning begonia with large pink flowers & silver leaves covered with red hair. Rekha Morris' notes

U550: (=02/07-4) Vietnam. Plant material collected by Mary Sizemore, May 2006. Rhizomatous, leaf blade light chartreuse, with hirsute red, margins red, crenulate, hirsute, palmate-pinnate red venation, main veins darker red, hirsute. Veining prominent on undersurface with main veins hirsute, red. Petioles light green, red hirsute. Mary Bucholtz, Charles Jaros

U551: (=02/07-11) Vietnam. Plant material collected by Mary Sizemore, Feb., 2007. Rhizomatous, leaf blade succulent, green smooth surface with palmate-pinnate venation, entire. Undersurface pale pink with maroon venation. Petiole round, having one side flat and grooved, young petiole red, aging to green. (similar to *B. handelii* var. *handelii*.) Mary Bucholtz, Charles Jaros.

U552: (=MS #2) (*B. rajah* like) Plant material collected by Mary Sizemore. Rhizomatous, leaf blade green with bronze between veins, rugose, covered with reticulated veins, margins entire. Smooth green petioles. Mary Bucholtz, Charles Jaros

U553: (=02/07-70) Vietnam. Plant material collected by Mary Sizemore, May 2006. Rhizomatous, leaf surface rust color, darker bronze center with short, white hirsute on upper surface, palmate-pinnate bronze venation with bronze umbo. Margins bronze, denticulate, finely hirsute, red. Undersurface with fewer hairs, deep red venation, main veins hirsute, red. Short red petioles, white hirsute. Mary Bucholtz, Charles Jaros

U554: (=02/07-5) Vietnam. Plant material collected by Mary Sizemore, May 2006. Rhizomatous, leaf blade olive green with light red hirsute on upper surface, palmate-pinnate, green venation, red umbo. Undersurface red venation, main veins slightly hirsute, red. Margins red, denticulate, finely hirsute. Petiole green, white hirsute. Mary Bucholtz, Charles Jaros

U555: (=02/07-10) Vietnam. Plant material collected by Mary Sizemore, possibly on bank of River Que. Rhizomatous, epiphyte. Leaf blade, lance, medium green, smooth seven-eight inches. Undersurface dark burgundy. Margins entire. Petiole flat front, rounded back, front green in color, back burgundy maturing to a pale, faded burgundy. Mary Bucholtz, Charles Jaros

U556: (=11/07/07) Philippines. Plant material collected by Mary Sizemore. Shrub-like. leaf blades bright apple green, sparsely covered with same color short hairs. Undersurface smooth, prominent bright red veins upper and lower surfaces. Margins crenate. Petioles maroon with red hirsute. Mary Bucholtz, Charles Jaros

U557: (=04/07-1) Philippines. Plant material collected by Mary Sizemore. Rhizomatous, leaf blade green, rugose, covered with reticulated veins, eight inches, upper surface ages with a light bronze. Undersurface lightly pilose. Margins entire. Petioles lightly pilose, emerge bronze/maroon, aging to green. Bracts shell/pink center, outlined in ivory, edges pilose, pink. Peduncle brownish/pink slightly pilose rising above foliage. Pistillate flowers, ovary three winged, light green, tepals white, staminate flowers shell/pink bud, opening to white. Mary Bucholtz, Charles Jaros

U558: (=MS #9) Plant material collected by Mary Sizemore. Rhizomatous, leaf blade lime/apple green, silver splotches between bronze/burgundy veins. Undersurface light white hairs. Margins entire/sub-entire, crenulate with red hirsute when young, turning white at maturity. Petiole emerges dark red/burgundy, white pubescent. Petiole at maturity turns green. Mary Bucholtz, Charles Jaros

U559: (=04/07-7) Philippines. Plant material collected by Mary Sizemore. Rhizomatous, peltate, 5 3/4 in. long, dark mahogany green with deep burgundy reverse with smooth stem same color as leaf reverse. Umbo radiates deep burgundy in lower center vein. New foliage green/bronze, maturing to darker leaf. Staminate and pistillate flower buds vibrant fuchsia/orange, flowers open deep clear bright pink. Ovary maintains the fuchsia/orange color. Possibly *B. coriacea*. Mary Bucholtz, Charles Jaros

U560: (U number assigned 5/11/08, by cjj.) Ecuador, Lita. Trailing/Scandent, small leaves, symmetrical. Specimen from Charles Nishihira, Honolulu who has grown since 1990, grows well, as yet, no flowers. (photo Johanna Zinn) Mary Bucholtz, Charles Jaros {Article and photos, *Begonia Leaflet*, Newsletter of the American Begonia Society/Southwest Region, June,2010-July, 2010}

U561: Plant material collected by Mary Sizemore. Typical rhizomatous, medium leaf, 7 inches, entire-subentire, succulent, waxy, hairless, venation palmate, green veins. base cordate, color mottled dark forest green and various shades light chartreuse, undersurface mottled green and burgundy, veins burgundy. New growth emerges chartreuse and burgundy. Stems burgundy, exhibit small slight ridge, hirsute. Staminate flower buds rise above foliage, orange, upon opening, 3/4 inch top tepal tinged on back showing through a light orange, remaining tepals soft pink/orange. Pistillate flower not observed. Mary Bucholtz, Charles Jaros

U562: Freda Holley descriptive article Vol. 75, *The Begonian* Nov./Dec. 2008, pg. 219, photo pg. 234 (following are notes from that article) Brazil. Thick-stemmed. From Mario Peixoto's list '*Begonia* sp 'Maranguape-CE', indicating an unidentified species from somewhere in Brazil. City of Maranguape in state of Ceara, which borders Atlantic in the mid region of Brazil, slightly inland. Thought to be a form of *B. reniformis*. (*The Begonian*, Vol. 76, J/F 2009, pg. 5: Jacques Jangoux states this begonia is the same as U 440.) Mary Bucholtz, Charles Jaros.

U563: (U number assigned 12/08) Philippines. Specimen growing in U.S. Botanic Garden (production greenhouse). Cane-like, tall growing. Leaf lightly serrated, thick medium green leaves, glabrous, prominent veins radiating from cream umbo, pronounced on new and older foliage. Foliage dark green, venation palmate, green. New foliage, underside and veins pale burgundy, fading to green at maturity. Brown stipules. Large, pendulous umbels of white flowers, ovary edges tinged light pink, tepals white, staminate flowers pure white, heavily fragrant. Mary Bucholtz, Charles Jaros

U564: (U number assigned 12/08) Ecuador. Specimen growing in U.S. Botanic Garden (production greenhouse). Rhizomatous, upright. Leaf lobed, medium leaved, medium green upper surface layered with silver, center green and heart shaped with green veins radiating from green umbo. Undersurface, center and edge light burgundy, veins lightly pubescent. Flowers rise high above foliage on slightly hirsute peduncle. Pistillate flower large, bi-color, ivory and pale salmon on center of tepals, reverse hirsute, three winged ovary with third wing burgundy. No staminate flower present as has bloomed prior to female. Grown by Johanna Zinn, Fairfax, VA, specimen has also been seen in Jackie Davis' collection, Aptos, CA. Mary Bucholtz, Charles Jaros

U565: (U number assigned 4/09) Collected by Rekha Morris, 12/3/08, India, Kutachadhri, Shimoga District, Western Ghats of Karnataka, 3500'. Never before recorded for Karnataka. Possibly identified as *B. aliciae*? Found only dry capsules on rock out crop, and one other small colony among rock crevices in shade some 100 yards from original site. Found a few tiny tubers by feeling under the moss and debris. These are setting leaves here in Pendleton, SC. Rekha Morris' notes

U566: (U number assigned 4/09) Collected by Rekha Morris, 12/2008, India, Khasia Hills, Meghalaya (formerly part of Assam), approx. 2500'. Possibly *B. josephii*. On banks of small stream, Mawphlang, 12/18/08; on banks of dry river bed towards Cherapunji, 12/19/08. Grows approx. 12-15". Did not find any peltate foliage. According to C.B. Clarke, juvenile leaves of *B. josephii* are sometimes peltate, according to Clarke there are several forms of *B. josephii*: var. *minima* has small unlobed leaves; var. *typica* has large leaves often lobed. 2009, possible form of *B. palmata*. Rekha Morris' notes

U567: (U number assigned 4/09) Collected by Rekha Morris, 12/20/08, India, Khasia Hills, Meghalaya, approx. 2500-3000'. In seasonally dry water run off channel towards Pynursla, tall species growing approx. 5'. My walking stick is 3' and this species is about 2' higher. In a later collection, found this species at several sites towards Pynursla in the Khasia Hills, Meghalaya, 12/20/08, growing on a moist cliff and a small colony in another dry water run off channel growing with a white maculated form. All three are possibly forms of the same species. Identified as *B. palmata*. Rekha Morris' notes

U568: (U number assigned 4/09) Collected by Rekha Morris, 12/20/08, India, towards Pynursla, 2500-3000'. A single, isolated plant of this species documented about 20' from U567 in the environs of the dry water run off channel towards Pynursla, Meghalaya. This species approx. 20", forms aerial tubers [?] at leaf nodes from which fresh clusters of foliage & fibrous roots develop. Rekha Morris' notes

U569: (U number assigned 4/09) Collected by Rekha Morris, 12/25/08, India, towards Mawsynram in Meghalaya, about 2700'. A lax red stemmed, fibrous rooted species growing along these cliffs, approx. 3' tall. Documented 2 more forms, one darker, growing together on either side of a small stream in thick over growth towards Dauki in Meghalaya. Identified as *B. palmata*. Rekha Morris' notes

U570: (U number assigned 4/09) Collected by Rekha Morris, 12/25/08 India, towards Dauki in Meghalaya, approx. 2000'. Rhizomatous species, growing in proximity with another white maculated form of U567. 1/22/09, India, Upper Dibang Valley, Arunachal Pradesh, approx. 1500'. Growing in proximity with *B. palmata* and in one location with *B. palmata*, *B. acetosella*, *B. longifolia* and another unidentified species, U572. Identified as *B. palmata*. Rekha Morris' notes

U571: (U number assigned 4/09) Collected by Rekha Morris, 1/22/09, India, Upper Dibang Valley, Arunachal Pradesh, approx. 1500'. A fibrous rooted species which looks superficially like *B. aborensis* with dark green foliage. Documented a single plant with a pale pink flower, and another with baccate fruit unlike those of *B. aborensis*. No open flowers or capsules. Growing with *B. palmata*, *B. acetosella*, *B. longifolia* and U572. Identified as *B. handelii*, new for India. Rekha Morris' notes

U572: (U number assigned 4/09) Collected by Rekha Morris, 1/22/09, India, Upper Dibang Valley, Arunachal Pradesh, approx. 1500'. No open flowers or capsules. Growing with *B. palmata*, *B. acetosella*, *B. longifolia* and U571. Could this be the same species as U574?, Possibly a natural hybrid: *B. longifolia* x *B. acetosella* var. *acetosella*. Rekha Morris' notes

U573: (U number assigned 4/09) Collected by Rekha Morris, 1/26/09, India, Lohit, Arunachal Pradesh, approx. 1200'. Single clump growing in sheltered, drier conditions in a vertical depression along a bank.

U574: (U number assigned 4/09) Collected by Rekha Morris, 1/27/09, India, Lohit, Arunachal Pradesh, approx. 1500'. Growing with *B. longifolia*, *B. palmata* and what appears to be a variant form. Are U573 and U574 forms of the species? No flowers [except for one sterile flower] or capsules of either documented on this trip. Also, a variant form of same species. Identified as *B. x chungii* (*B. longifolia* x *B. palmata*), new for India. Rekha Morris' notes

U575: (U number assigned 4/09) Collected by Rekha Morris, 1/25/09, India, Lohit, Arunachal Pradesh, approx. 1500'. Possibly *B. perakensis*, which appears not to have been documented for India. Foliage similar to that of *B. hatacoa*, flowers quite distinct. See Ruth Kiew's book {*Begonias of Peninsular Malaysia*, Ruth Kiew, 2005} on the begonias of Malaysia for *B. perakensis* King. First documented in 2007. At that time I did not recognize them and thought that they might be a peculiar form of *B. hatacoa*. Identified as *B. perakensis*, new for India. Rekha Morris' notes

U576: (U number assigned 4/09) Collected by Rekha Morris, 1/25/09, India, Lohit, Arunachal Pradesh, approx. 2100'. Looks a little like *B. sikkimensis* but is a more robust, and sturdy plant with larger foliage. Documented it in several locations, and found plenty of seeds, but no flowers. First documented this species in one location in Lohit 2007. Rekha Morris' notes

U577: (U number assigned 5/4/09) Plant material collected by Hieu Nguyen. Collection site and date unknown. Rhizomatous, leaf blade completely glabrous, slightly cupped, bordered with irregular, gunmetal green, gives appearance of being covered with iridescent silver powder, slightly succulent, three inches in size. Undersurface light green, pale pink on reverse of gunmetal green upper surface markings. Petioles and rhizomes dark burgundy. Margins entire. Stipules transparent. Growing in collections of Ed Bates and Ingeborg Foo, CA, 5/09. (photo Janet Brown) Mary Bucholtz, Charles Jaros

U578: (U number assigned 6/09) Thailand, purchased Chiang Mai, plant market, summer 2007 by Charles Jaros and Maxine Zinman. Rhizomatous, large leaved, lobed, medium green with dark chocolate brown overlay, spotted and streaked, and bordered leaf edge, light green umbo, light green veining. Upper surface scabrous, margins strigose. Undersurface showing green veins, upper chocolate markings are burgundy, red collar at umbo attachment. Stems green with red streaks with one short, stiff, red hair coming from most streaks. Possibly a hybrid. Mary Bucholtz, Charles Jaros

U579: (U number assigned 6/27/09) Collected by Rekha Morris, 1/21/09, India, Dibang Valley, Arunachal Pradesh. Found this species accidentally on way to Roing, when lost in a jungle inhabited by wild elephants - the road ended at a broken bridge over a narrow ravine. Species which resembles *B. diadema*. Rekha Morris' notes

U580: (U number assigned 6/27/09) Collected by Rekha Morris, Mexico, Veracruz, environs of Orizaba/Cordoba, 3000'. Natural hybrid of *B. barkeri* x *B. incarnata*. Rekha Morris' notes

U581: (U number assigned 6/27/09) Collected by Rekha Morris, 2005, India, W. Kameng, 300-500'. Found capsules along the same 10' stretch of cliff side in Feb. 2009 where I documented the single leaf in 2005. Have assigned it a U number, as I cannot be sure that this will turn out to be *B. picta*. Rekha Morris' notes

U582: (U number assigned 8/09) China, plant material collected by Ozzie Johnson, collection number OJ98CH435, (specimen given to U numbers co-directors). Rhizomatous, large leaved, parted, Upper surface, medium green fading to lighter green with age, from pustules short stiff hairs appear. Undersurface, smooth, shows new leaf veins burgundy, fades to light green with age. Leaves slightly cupped downward. Petiole at rhizome begins burgundy, with age, fades to light green. Shows affinity to *B. pedatifida*. To date, no flowers. Mary Bucholtz, Charles Jaros

U583: (U number assigned 8/09) Yunnan, plant material given to U numbers co-directors by Ozzie Johnson, his number 509-6, he received from Paul Jones. Rhizomatous, entire/sub-entire, semi-succulent. Upper surface medium green with light green veins, sparse straight, short hair on surface. Undersurface smooth, veins pale burgundy. Umbo pale cream, upper and lower. Margin entire, but where each vein ends there is a short stiff red hair. Rhizome light green and shows pale burgundy where each leaf emerges. Shows affinity to *B. chitoensis*. To date no flowers. Mary Bucholtz, Charles Jaros

U584: (U number assigned 8/09) China, plant material collected by Ozzie Johnson, collection number OJ98CH442. (specimen given to U numbers co-directors). Rhizomatous, cleft. Upper surface, bronzy green, red umbo, radiating red veins, very short stiff red hairs, well covered. Undersurface burgundy, veins burgundy. Petiole burgundy. Margins slightly dentate. Rhizome burgundy. To date no flowers. Mary Bucholtz, Charles Jaros

U585: (U number assigned 8/09) China, plant material collected by Ozzie Johnson, collection number OJ98CH433, (specimen given to U numbers co-directors). Rhizomatous, large leaf, parted. Upper surface medium green, from small pustules short stiff white hairs arise, light burgundy veins sparsely showing red hairs. Undersurface light burgundy fading to light cream burgundy. Petiole burgundy 1 1/2 inch at rhizome, fading to creamy green as it rises, slightly hirsute, red. Rhizome red. Affinity to *B. pedatifida*. To date no flowers. Mary Bucholtz, Charles Jaros.

U586: (U number assigned 2/23/10) Collected by Rekha Morris, 12/09, India, on road to Kamlang Wildlife Sanctuary, Lohit, ca. 300m. A tall, variegated lobed species. Rekha Morris' notes

U587: (U number assigned 2/23/10) Collected by Rekha Morris, 12/09, India, on road to Kamlang Wildlife Sanctuary, Lohit, ca. 300m. A profusely blooming sp. Rekha Morris' notes

U588: (U number assigned 2/23/10) Collected by Rekha Morris, 12/09, India, north of Tezu, Lohit, ca. 700m. Another lobed sp. with tiny white flowers. Found just two plants of this species. Rekha Morris' notes

U589: (U number assigned 2/23/10) Collected by Rekha Morris, 12/09, India, Lower Dibang Valley, Arunachal, approx. 1200m. Two forms, [green & bronze/maroon] of this rhizomatous species found on moist cliffs. *B. adscendens*? A single plant of a small species growing in waterfall in East Siang, 12/09. Rekha Morris' notes

U590: (U number assigned 2/23/10) Collected by Rekha Morris, 12/09, India, North of Rotung, E. Siang, ca. 500m. A small tuberous species growing in a waterfall. Rekha Morris' notes

U591: (U number assigned 2/23/10) Collected by Rekha Morris, 12/09, India, between Rotung and Pangin, East Siang, ca. 500m. A small rhizomatous species growing in profusion along both sides of vertical cliffs above a fast flowing stream. Rekha Morris' notes

U592: (U number assigned 2/23/10) Collected by Rekha Morris, 12/09, India, in the environs of Along, W. Siagn, upper Subansiri, ca. 400-500m. A large rhizomatous species with tomentose foliage flushed red on the undersides of its leaves. Rekha Morris' notes

U593: (U number assigned 2/23/10) Collected by Rekha Morris, 12/09, India, North of Along, W. Siang, Ca. 500m. A small, maroon and green, tomentose leaved rhizomatous species, in a small colony, found along a vertical wall/cliff towards Tato. *B. wengeri*? Rekha Morris' notes

U594: (U number assigned 2/23/10) Collected by Rekha Morris, 12/09, India, North of Along, W. Siang, Ca. 500m. Two small plants of a species with alternate leaves found with U593, on the same steep cliff side with U593. Looked up and down cliff to see if I could find any other plants of this species but I did not find any others. Rekha Morris' notes

U595: (U number assigned 2/23/10) Collected by Rekha Morris, 1/10, India, about 90km. from Along towards Daporijo, Ca. 500m. A large leaved species with silver banding. Four plants of the bronze/maroon form along a mushy landslide. Second colony with silver banded leaves and a few more of the maroon forms 2-3 km further along these hills. Found some capsules but no flowers of this striking metallic species with very small rhizomes. Rekha Morris' notes

U596: (U number assigned 2/23/10) Collected by Rekha Morris, 1/10, India, between Daporijo and Ziro, Upper Subansiri, ca. 900-1000m. Two distinct forms (U596 & U597) of a possible natural hybrid between U526 and *B. longifolia*. These were the only 2 species in this area apart from this one U596. The baccate fruit of U596 is doing what U526 does: it becomes flattened, and the leaves of U596 become elongated like those of *B. longifolia*. (see notation for U597) Rekha Morris' notes

U597: (U number assigned 2/23/10) Collected by Rekha Morris, 1/10, India, between Daporijo and Ziro, Upper Subansiri, ca. 950m. Another possible natural hybrid of U529 and *B. longifolia*, the only two species in this area stretching about 1/2 km. *B. longifolia* acquires the red splash of U529, while the latter starts to have a branching stem like those of *B. longifolia*. The single baccate fruit on one of these is 3 sided rather than the usual 4 of U529. Natural hybrids are infrequently encountered in the wild, but to find 2 distinct forms hybridized from the same two species in two distinct colonies several km apart is so rare as to be unbelievable! (see notation for U596) Rekha Morris' notes

U598: (U number assigned 2/23/10) Collected by Rekha Morris, 12/09, India, North of Ziro towards Palin, Kurung Kumay, border of Lower Subansiri and Kurung Kumay, ca. 1600m. This small rhizomatous species, which roots where it touches the ground, has a metallic blue/purple sheen on its dark green/maroon leaves. Rekha Morris' notes

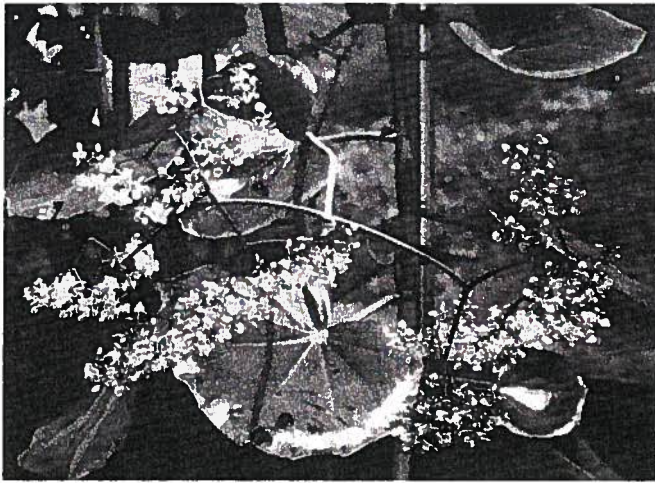
U599: (U number assigned 2/23/10) Collected by Rekha Morris, 1/10, India, the environs of Itanagar, Papumpare, ca. 250-300m. A long leaved, bronze species found as I was driving out of Itanagar among the Gohpur gorges. Only found two plants of this rhizomatous species in an area which I have explored several times. Rekha Morris' notes

U600: (U number assigned 2/23/10) Collected by Rekha Morris, 12/09, India, between Daporijo and Ziro, Upper Subansiri, 1100m. Unusual form of *B. palmata*. Its leaves are heart shaped and without any lobes. From a distance I thought I have found *B. rex* in a most unexpected place. However, the growth habit of this species is like that of *B. palmata*. Rekha Morris' notes

U601: (U number assigned 2/23/10) Collected by Rekha Morris, 1/10, India, hills towards Seppa, 1600m. A possible natural hybrid of *B. rex* and the species with five red splashes, U526. There were only three begonia species over a stretch of several km, U526, all three forms of *B. rex* and *B. thomasonii*. In this small patch there were only plants of *B. rex* and U526. *B. rex* in this area have strongly undulating leaf margins. Moreover, they are strongly flushed red or pink. A leaf of U526 with 5 red splashes growing with what looks like the green form of *B. rex*. However, these had long, upright stems and the plant did not look like *B. rex*. I am totally puzzled by what is going on in this area! The plants which I think of as U601 are showing signs of growth, so hopeful in time we will have more information to ascertain what this serrated leaved sp. is! Rekha Morris' notes

U602: (U number assigned 5/10) Plant material received by Charles Henthorne about 2 years ago {2008} from a friend who collected it in Sumatra. It is full grown mature size now and is no higher than 2.5" tall. I believe it is a true little miniature plant. Absolutely loaded with blooms and many unopened blooms also. Seed I pollinated from the same plant using male and female flowers off the same plant has germinated and are true to the parent plant itself. Charles Henthorne's notes and photo {photo appears Vol. 77, *Begonian* July/August 2010, pg.127}

U603: (U number assigned 6/3/10) Collected by Rekha Morris, 3/2004 & 2006, Mexico, environs of Orizaba/Cordoba, Veracruz. Possible natural hybrid of *B. barkeri* x *B. incarnata*. Rekha Morris' notes



U001 *B. grisea*



U003 *B. soli-mutata*



U002



U008 *B. subvillosa*



U009 *B. thelmae*



U012



U010



U013



U014



U015 *B. cumingii*



U032



U026 *B. palmata* var. *palmata*



U033 *B. leprosa*



U029



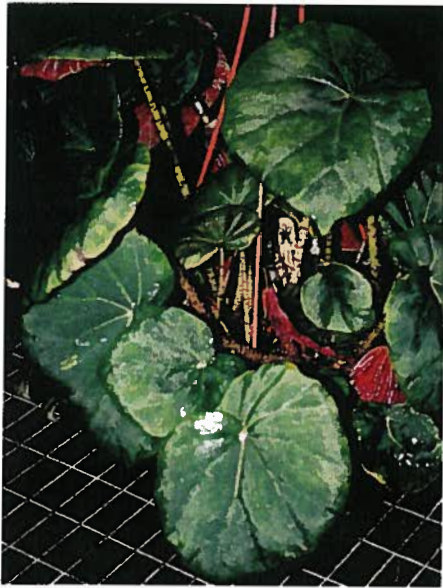
U038 *B. chlorosticta*



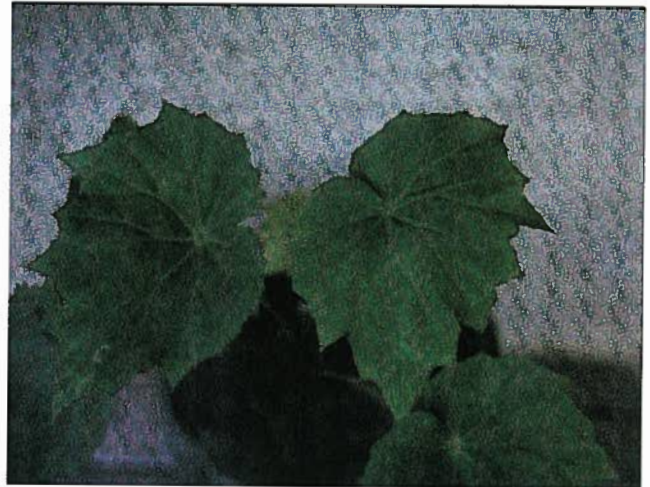
U039 *B. heracleifolia* var. *nigricans*



U049 *B. juliana*



U043



U050



U044 *B. dipetala*



U055



U057



U062



U058 *B. cumingii*



U064



U059



U074



U075



U082 *B. nigritarum*



U076 *B. polilloensis*



U084 *B. sericoneura*



U086 *B. luzonensis*



U078 *B. maculata* var. *maculata*



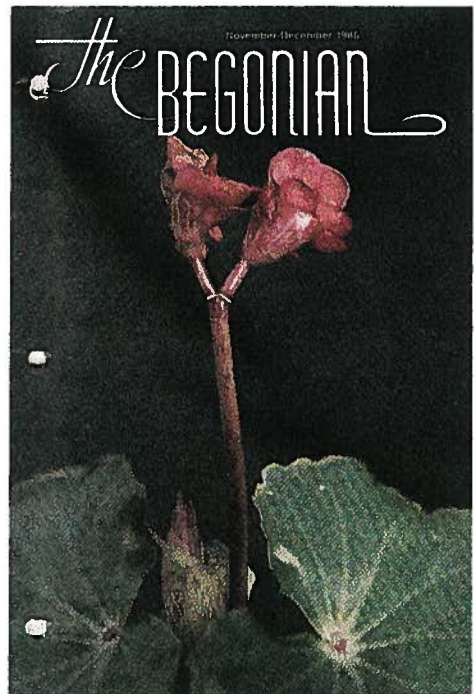
U087 *B. coriacea*



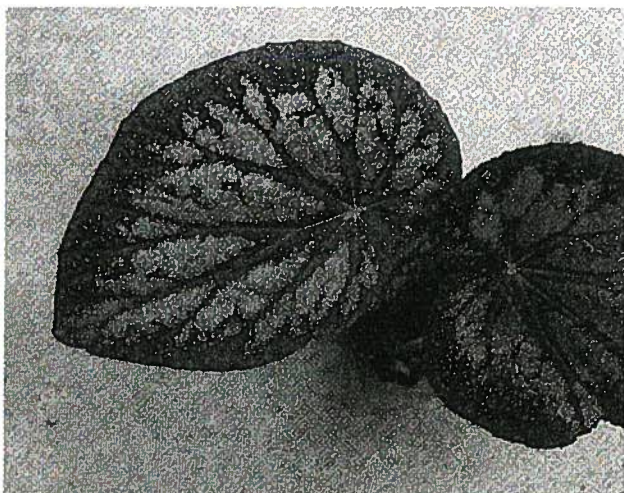
U093



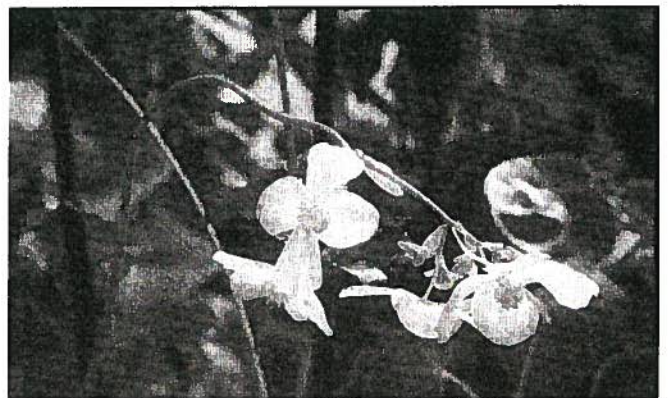
U089 *B. quadrialata* spp. *nimbaensis*



U095 *B. roezlii*



U090



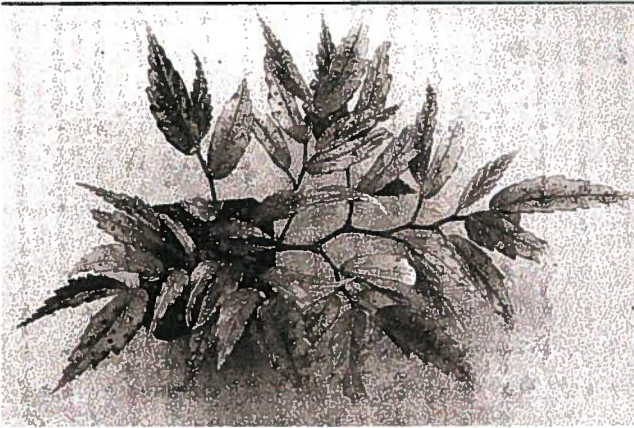
U103



U105 *B. holtonis*



U134 *B. holtonis*



U116



U135 *B. foliosa* var. *foliosa*



U133 *B. holtonis*



U136



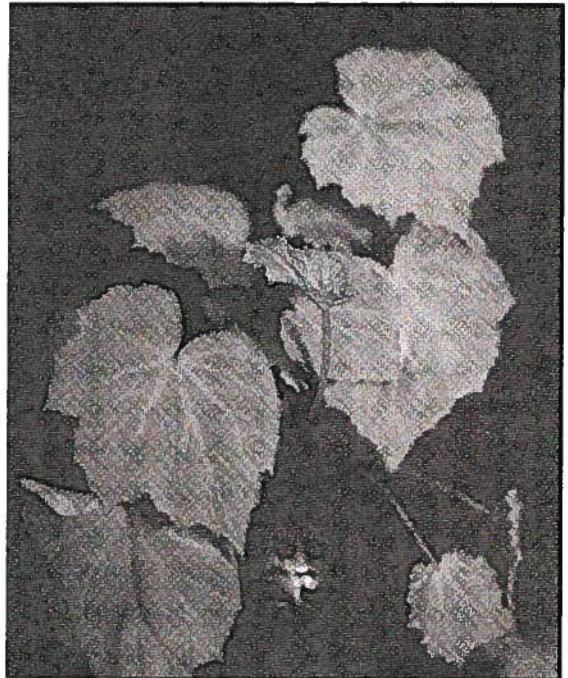
U144 *B. glabra*



U152 *B. variegata*



U150 *B. heracleifolia*



U155



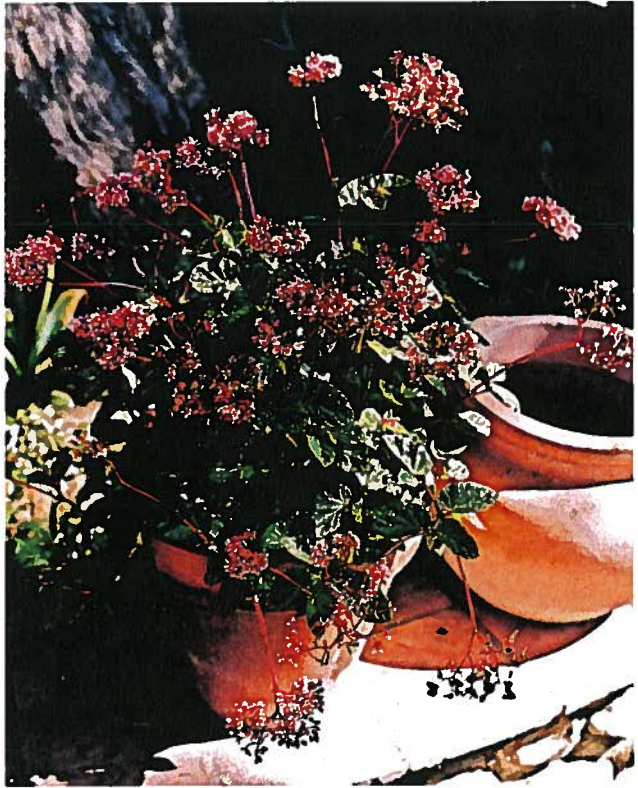
U151 *B. subvillosa*



U163 *B. dichotoma*



U166 *B. hernandioides*



U170 *B. domingensis*



U167 *B. glabra*



U171 *B. manicata*



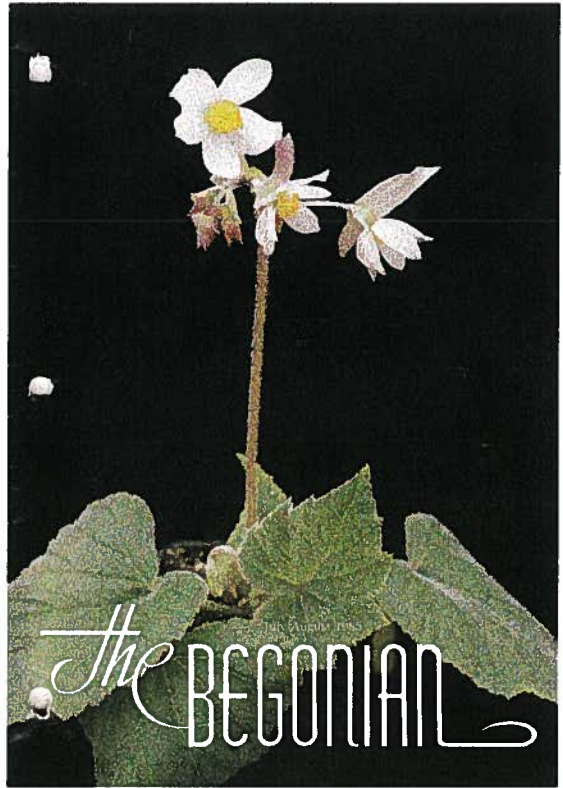
U168



U175 *B. mariannensis*



U176



U187 *B. novogranatae*



U177



U189 *B. quadrialata* ssp. *quadrialata* var. *quadrialata*



U178 *B. crassicaulis*



U192



U193



U199



U194 *B. urophylla*



U202



U197



U203



U205



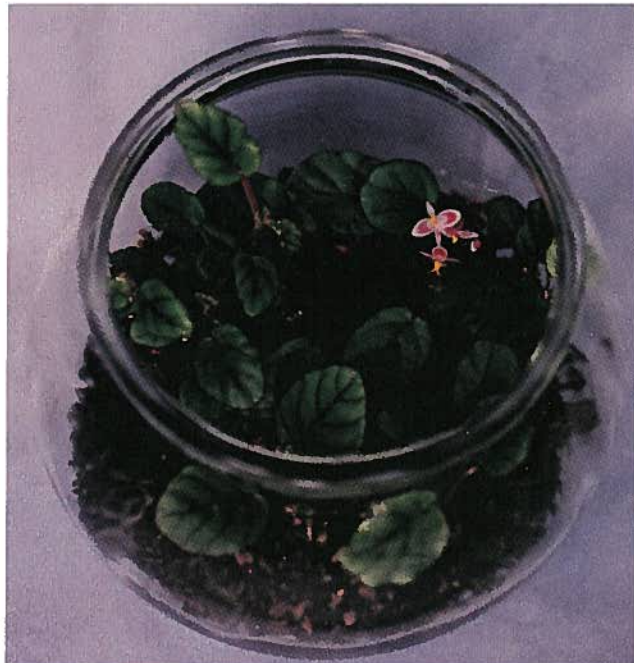
U219



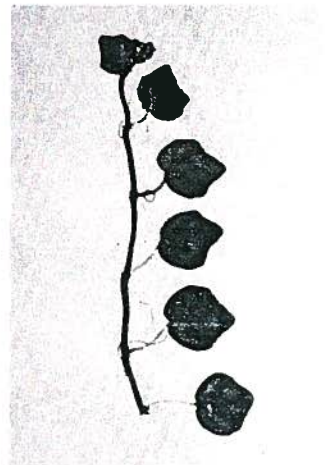
U214



U221



U217 *B. letestui*



U225



U230 *B. holttumii*



U242 *B. rossmanniae*



U237



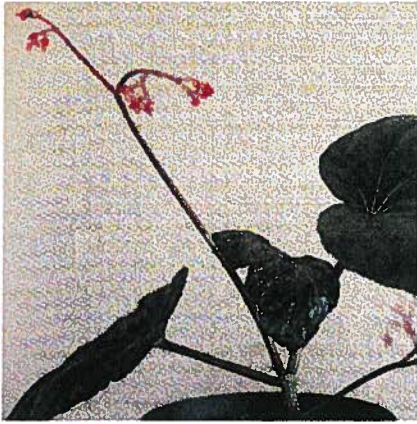
U250



U240 *B. parviflora*



U251 *B. chloroneura*



U252



U260



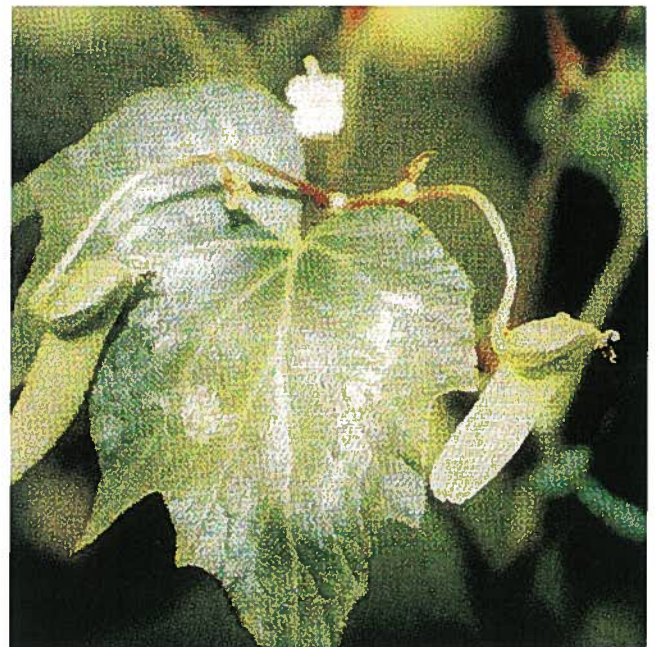
U254 *B. acetosa*



U261



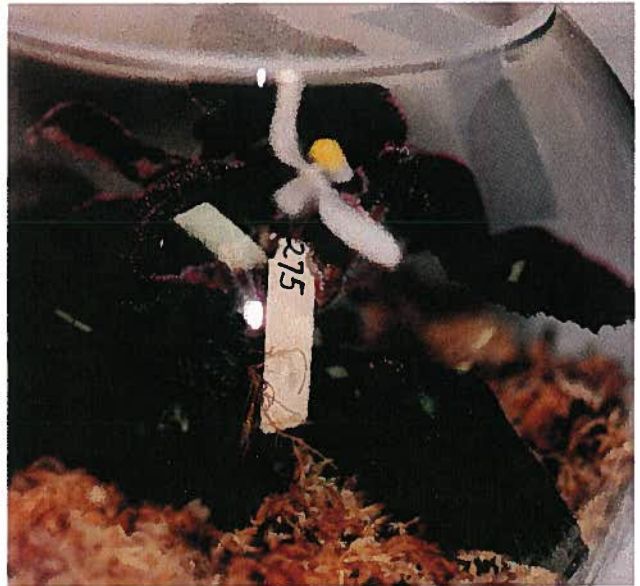
U257



U265



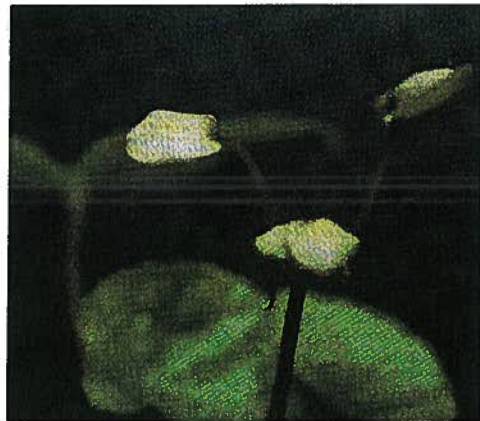
U268



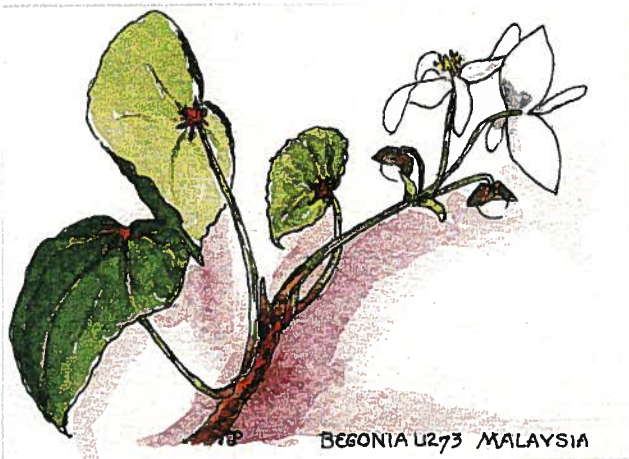
U275



U269



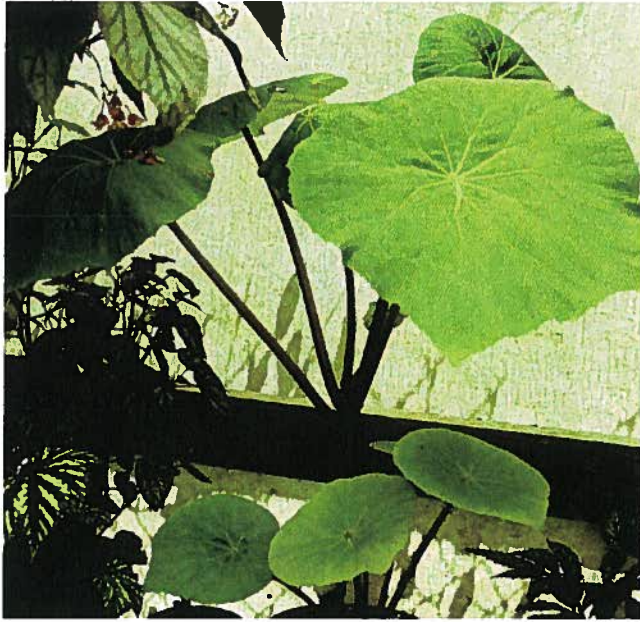
U276



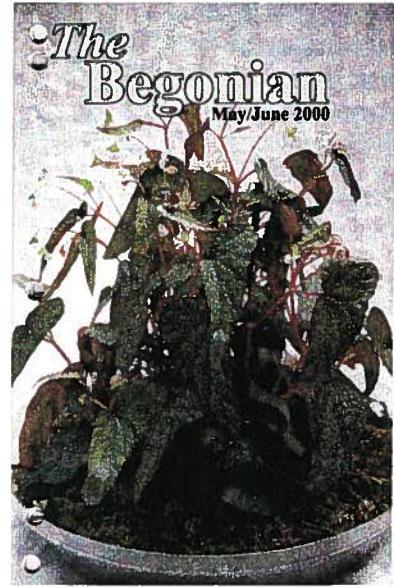
U273



U295 *B. froebelii*



U298



U305 *B. variabilis*



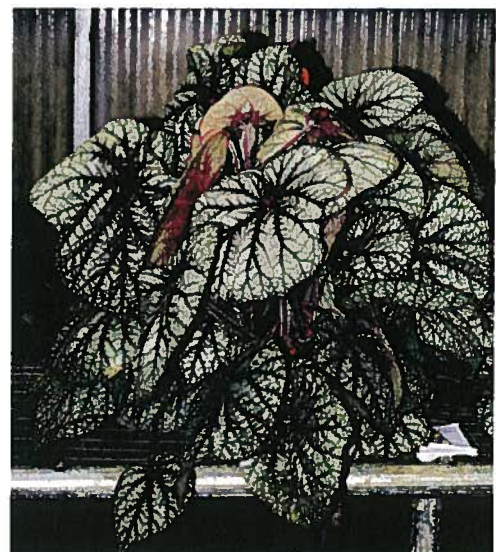
U303



U308



U304



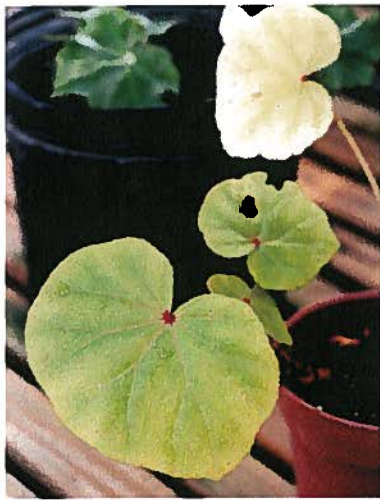
U309



U314



U333 *B. pedata*



U331



U336



U332 *B. biserrata*



U340 *B. multangula*



U346



U359



U353 *B. longifolia*



U363



U358



U379



U380



U402



U388 *B. sizemoreae*



U404 *B. hemsleyana*, (spotted variant)

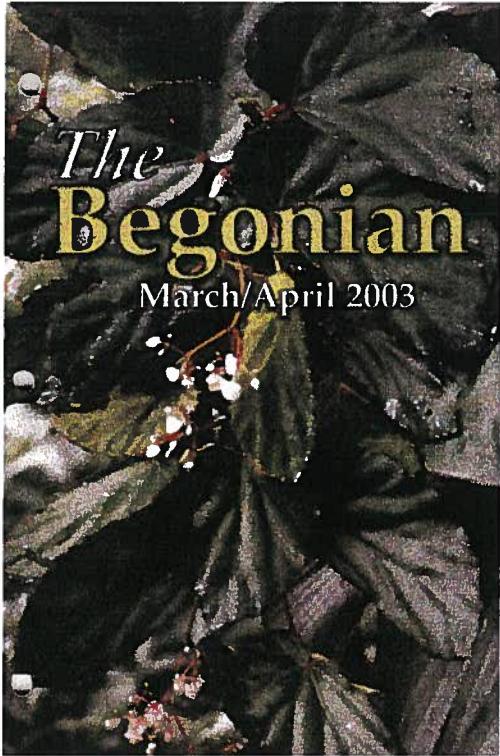


U400

American Begonia Society



U415 *B. alveolata*



U425



U440



U444



U434 *B. barsalouxiae* = *B. plebeja*



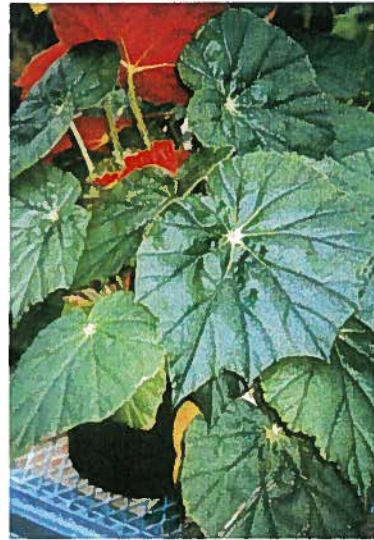
U439



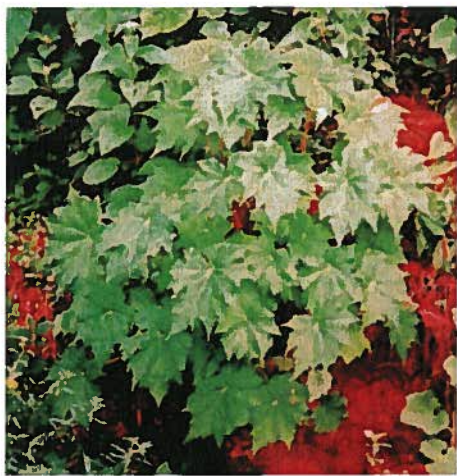
U446



U461 *B. involucrata*



U464



U462



U473



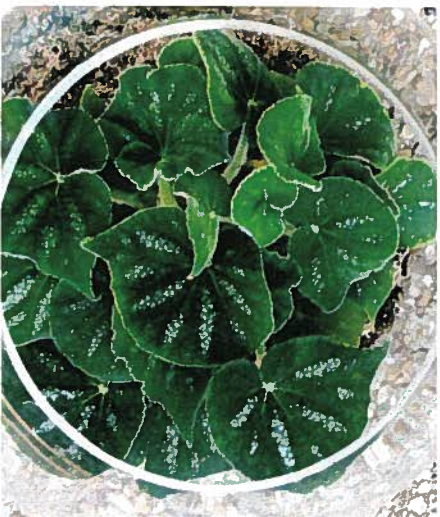
U463



U474



U475



U476



U478



U479



U477 *B. palmata* var. *palmata*

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U480 *B. handेलii* var. *handेलii*

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U481 *B. silletensis* subsp. *mengyangensis*



U484



U482 *B. 'Tangalooma'*



U485



U483



U486



U487



U491



U488



U492



U489



U494



U496



U499



U497



U500



U498



U501



U502



U505



U503



U506



U504



U507



U508



U511



U509



U512



U510



U513



U514



U517



U515



U518



U516



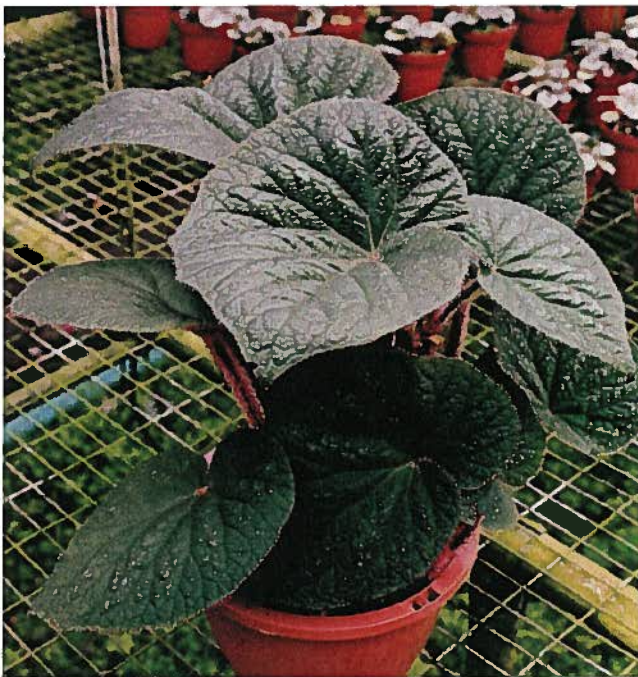
U519



U520



U523



U521



U524 *B. malabarica* forma *spockii*



U522 *B. sikkimensis* var. *kamengensis*



U525



U526



U529



U527



U530 (left B, right A)



U528



U531



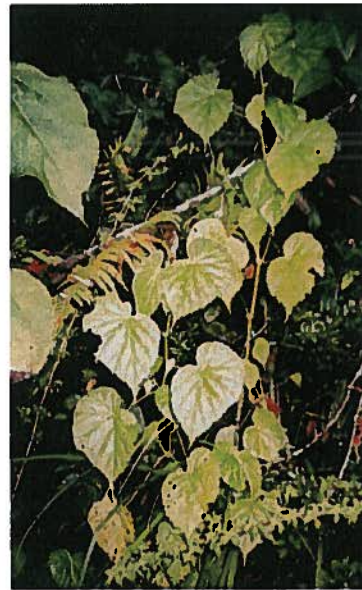
U532 *B. thomsonii*



U535 *B. morrisiorum*



U533 *B. pseudodaedalea*



U536



U534



U537



U538



U542



U540



U543



U541



U544



U545 *B. cathcartii*



U548



U546



U549



U547



U550



U551



U554



U552



U555



U553



U556



U557



U560



U558



U561



U559



U562



U563



U566



U564



U567 *B. palmata*



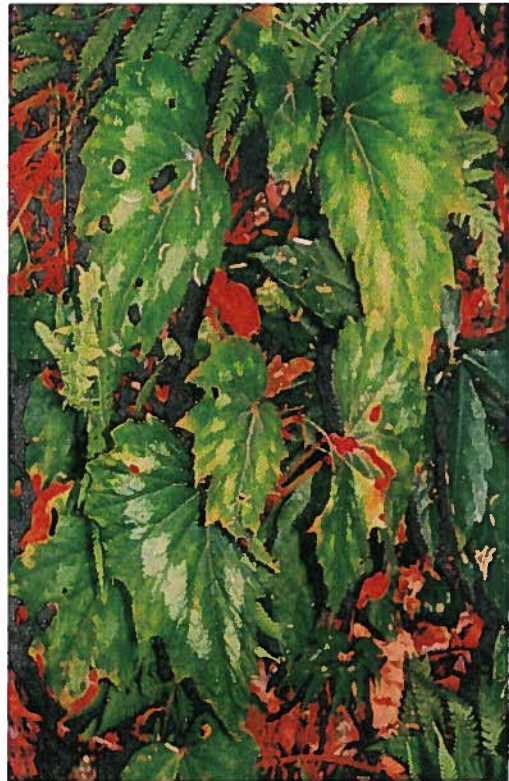
U565



U568



U569 *B. palmata*



U572



U570 *B. palmata*



U573



U571 *B. handelii*



U574 *B. xchungii* (*B. longifolia* x *B. palmata*)



U575 *B. perakensis*



U578



U576



U579



U577



U580



U581



U584



U582



U585



U583



U586



U587



U590



U588



U591



U589



U592



U593



U596



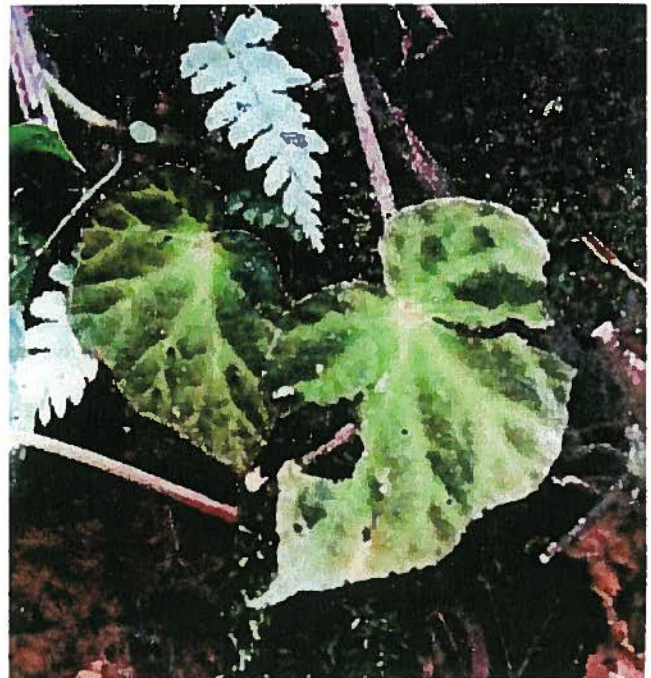
U594



U597



U595



U598



U599



U601



U600



U602

